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IN
THE DOMINION OF CANADA

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With a Supplement on Memorial Addresses on the
Life and Services of Simon N. Patten



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EDITOR'S PREFACE

RECENT years have intensified and developed the organized social and industrial life of Canada, and, with that development, problems—some of an international nature, some peculiar to the Dominion—have forced themselves to the front and demanded consideration. An effort is made in this volume to present facts and trends as to these modern Canadian activities by writers most familiar with the various fields.

In the first section the general question of population is considered with special reference to characteristic and peculiar conditions and to the issues raised by immigration and Canadianization. This may be called the human background. The next section deals with the resources of the country, their development and conservation with special articles on agricultural and industrial research. The next sections cover the problems of education—primary, secondary, and higher; transportation, with special consideration of the national railways; money and banking, in which comparisons are made with the United States in relation to comparative prices and to banking; foreign trade, with a general review, and detailed discus-

sions on the movement of capital, essential imports, and the marketing of wheat; public finance in its several aspects; while a final section attempts to deal with a group of social experiments and problems from their peculiar Canadian angle.

I venture to hope that the volume will prove of value and that it will stimulate interest in Canada and her public affairs. I should like to thank most sincerely the writers who have contributed articles. I hope that I have succeeded in obtaining not only a representative group of writers but a group of sufficient reputation as experts to give to this number of *THE ANNALS* a distinct and valid place in Canadian history.

I should like to add that I take no responsibility for the opinions expressed in any article. I have made it clear to each writer that the responsibility is a personal one, and as a consequence I have deliberately made no attempt to correct the material in any of the manuscripts or to suggest the inclusion or exclusion of any particular judgments or opinions.

W. P. M. KENNEDY.

University of Toronto, Toronto.

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The Growth of Population in Canada

By R. H. COATS

Dominion Statistician, Ottawa

IT may not be generally known that the credit of taking the first census of modern times belongs to Canada. The year was 1665, the census that of the colony of New France. Still earlier records of settlement at Port Royal (1605) and Quebec (1608) are extant; but the Census of 1665 was a systematic "nominal" enumeration of the people, taken on the *de jure* principle, on a fixed date, showing age, sex, occupation, and conjugal and family condition. A supplementary enquiry in 1667 included the areas under cultivation and the numbers of sheep and cattle. When it is recalled that in Europe the first census dates only from the Eighteenth Century (those of France and England from the first year of the Nineteenth), and that in the United States as well the census begins only with 1790, the achievement of the primitive St. Lawrence colony in instituting what is today one of the principal instruments of government may call for more than passing appreciation.

EARLY CENSUS FIGURES

The Census of 1665 (the results of which occupy 154 pages in manuscript, still to be seen in the Archives at Paris, with a transcript at Ottawa) showed some 3,215 souls. It was repeated at intervals more or less regularly for a hundred years. By 1685 the total had risen to 12,263, including 1,538 Indians collected in villages. By the end of the century it had passed 15,000, and this was doubled in the next twenty-five years. Not to present further details of the rate of growth, it may be said that at the time of the

British Conquest (1763) the population of New France was about 70,000, whilst another 10,000 French (thinned to these proportions by the expulsion of the Acadians) were scattered through what is now Nova Scotia, New Brunswick and Prince Edward Island. The British population of Nova Scotia was at this time about 9,000.

After the Conquest, our chief reliance for statistics must be laid for half a century and more upon the reports of colonial governors—more or less sporadic—though censuses of the different sections under British rule were taken at irregular intervals. British settlement on a substantial scale in the Gulf Provinces and in Ontario dates only from the Loyalist movement which followed the American Revolution, at the end of which, *i.e.*, about the year of the Constitutional Act (1791), the population of Lower Canada was approximately 163,000, whilst the newly constituted Province of Upper Canada under Lieutenant-Governor Simcoe numbered perhaps 15,000, and the addition of the Gulf Colonies brought the total well over 200,000. A decade later Canada began the Nineteenth Century with a population of probably not less than 250,000 or 260,000.

Upper Canada.....	(1824)	150,069
“ “	(1840)	432,159
Lower Canada.....	(1822)	427,465
“ “	(1844)	697,084
New Brunswick.....	(1824)	74,176
“ “	(1840)	156,102
Nova Scotia.....	(1817)	81,351
“ “	(1838)	202,575
P. E. Island.....	(1822)	24,600
“ “	(1841)	47,042

Around 1820 and 1840, respectively, these numbers had reached the following proportions: (see p. 1)

ESTABLISHMENT OF REGULAR CENSUS-TAKING

The policy of desultory census-taking was ended in 1847 by an Act of the United Provinces creating a "Board of Registration and Statistics," with instructions "to collect statistics and adopt measures for disseminating or publishing the same," and providing also for a decennial census. The first census thereunder was taken in 1851, and as similar censuses were taken by New Brunswick and Nova Scotia in the same year, we have now a regular measure of population growth in Canada over the past three quarters of a century. The statistics of these censuses, by provinces, are collected in the accompanying table, on which comment for those familiar with Canadian history is largely superfluous and, for the earlier decades at least, impossible within the confines of a limited sketch. Suffice it to note that the fifties saw a very rapid development, especially in Ontario, and that the sixties showed only less substantial gains. In the years following Confederation, again, there was a spurt, the increase between 1871 and 1881 (which included several lean years towards the end) being 635,553, or 17.23 per cent. In neither of the two decades next following, however, was this record equalled, either absolutely or relatively, the gains in each being under 600,000, or 12 per cent. With the end of the century the population of Canada had reached approximately five and a quarter millions, or twenty times that of 1800.

TWENTIETH CENTURY EXPANSION

It is within the confines of the present century that the most spectacular

expansion of the Canadian population has taken place. The outstanding feature was, of course, the opening to settlement of the "last best West." The unorganized territories of British North America had been ceded to the Dominion soon after Confederation, and the West had been tapped and traversed by the Canadian Pacific Railway in the eighties and nineties. But though western population doubled with each of these decades, it was only with the launching of a large-scale immigration movement after 1900 that western settlement and production became a first-rate economic factor. Simultaneously an almost equally striking development occurred in the industrial centers of Eastern Canada, which formed the immediate basis for the move upon the West. At the back, of course, was the heavy inflow of British capital—a total of two and a half billions of dollars within a dozen years—which went to finance the large constructive undertakings (chiefly railway and municipal) which characterized the movement and which represented at bottom the traditional policy of England in search of cheap and abundant food for her workshop population. The years 1900 to 1910, in brief, form the *decas mirabilis* of Canadian expansion. The immigration movement just mentioned, which had previously run well under 50,000 per annum, rose rapidly to over five times that volume, eventually passing 400,000 in a single year. In the ten years 1900 to 1910 it totalled over 1,800,000, and though at least a third of these were lost (partly in the return to Europe of labor temporarily attracted by the railway and other developments in progress, and partly in the never-ceasing and natural "drag" of the United States upon a virile and less wealthy people), it formed the chief factor in the gain of 34 per cent all-

round which the total population of Canada registered in that decade, and which was larger than the relative growth of any other country during the same period. The movement was continued and even intensified in the first three years of the second decade of the century, after which a recession set in to which the outbreak of the war gave a new and wholly unexpected turn. Nevertheless the period which closed with the Census of 1921 again showed over 1,800,000

in immigrant arrivals in Canada, and though the proportionate loss of these was very heavy (probably as much as two-thirds), Canada's relative gain for the decade again headed the list of countries, her 22 per cent increase comparing with one of 21 per cent for Australia, 20 per cent for New Zealand, 14 per cent for the United States, and very much lower rates for the countries of continental Europe.

The story by provinces is told in

POPULATION OF CANADA, 1851-1881

PROVINCES	1851	1861	1871	1881
Prince Edward Island	66,000*	80,857	94,021	108,891
Nova Scotia	276,854	330,857	387,800	440,572
New Brunswick	193,800	252,047	285,594	321,233
Quebec	890,261	1,111,566	1,191,516	1,359,027
Ontario	952,004	1,396,091	1,620,851	1,926,922
Manitoba .....	.....	.....	25,228	62,260
Saskatchewan .....	.....	.....	.....	.....
Alberta .....	.....	.....	.....	.....
British Columbia .....	.....	.....	36,247	49,459
Yukon .....	.....	.....	.....	.....
Northwest Territories	6,000*	15,000*	48,000*	56,446
Total	2,384,919	3,156,418	3,689,257	4,324,810

* Estimated.

POPULATION OF CANADA, 1891-1921

PROVINCES	1891	1901	1911	1921
Prince Edward Island	109,078	103,259	93,728	88,615
Nova Scotia	450,396	459,574	492,338	523,837
New Brunswick	321,263	331,120	351,889	387,876
Quebec	1,488,535	1,648,898	2,003,232	2,361,199
Ontario	2,114,321	2,182,947	2,523,274	2,933,662
Manitoba	152,506	255,211	455,614	610,118
Saskatchewan .....	.....	91,279	492,432	757,510
Alberta .....	.....	73,022	374,663	588,454
British Columbia	98,173	178,657	392,480	524,582
Yukon .....	.....	27,219	8,512	4,157
Northwest Territories	98,967	20,129	18,481	7,988
Total	4,833,239	5,371,315	7,206,643	8,788,483

East

West

the table. It may be added that it is only in recent years that anything better than a guess is possible as to natural increase in Canada, but the excess of births over deaths was probably not less than 1,000,000 during the decade 1910-1920. Canada's loss in killed during the war was 56,000, but if the victims of the Spanish in-

fluenza be regarded as a war loss the total was over 100,000. It would seem fair to assume that but for the war the census just taken would have shown 9 millions in Canada instead of the 8,788,483, which is the authentic count.

In 1881 the "centre" of population east and west was in the county of

RURAL AND URBAN POPULATION BY PROVINCES AND TERRITORIES, 1891-1901

PROVINCES	1891		1901	
	Rural	Urban	Rural	Urban
Canada.....	3,296,141	1,537,098	3,357,093	2,014,321
Alberta.....	.....	.....	54,489	18,583
British Columbia.....	60,945	37,228	88,478	90,170
Manitoba.....	111,498	41,008	184,775	70,490
New Brunswick.....	272,362	48,901	253,835	77,283
Nova Scotia.....	373,403	76,993	330,191	120,383
Ontario.....	1,295,323	818,998	1,246,969	935,975
Prince Edward Island.....	94,823	14,255	88,304	14,935
Quebec.....	988,820	499,719	994,833	654,065
Saskatchewan.....	.....	.....	77,013	14,266
Yukon.....	.....	.....	18,077	9,142
Northwest Territories.....	.....	.....	20,129	.....
R. C. Navy.....	.....	.....	.....	.....

RURAL AND URBAN POPULATION BY PROVINCES AND TERRITORIES, 1911-1921

PROVINCES	1911		1921	
	Rural	Urban	Rural	Urban
Canada.....	3,933,696	3,272,947	4,435,710	4,352,773
Alberta.....	236,633	137,662	365,550	222,904
British Columbia.....	188,796	203,684	277,020	247,562
Manitoba.....	261,029	200,365	348,502	261,616
New Brunswick.....	252,342	99,547	263,432	124,444
Nova Scotia.....	306,210	186,128	296,799	227,098
Ontario.....	1,198,803	1,328,489	1,226,379	1,707,283
Prince Edward Island.....	78,758	14,970	69,522	19,093
Quebec.....	1,038,934	966,842	1,038,630	1,322,569
Saskatchewan.....	361,037	131,395	538,552	218,938
Yukon.....	4,647	3,865	2,851	1,306
Northwest Territories.....	6,507	.....	7,988	.....
R. C. Navy.....	.....	.....	483	.....

Prescott, Ontario, not far from Caledonia village. In 1891 it had moved west to the vicinity of Ottawa, where it remained in 1901. In 1911 the county of Victoria, Ontario, contained the center, and it is probably in Simcoe County, Ontario, at the present time.

URBAN VS RURAL INCREASE

There are numerous features that invite analysis in a record like the above. That of racial distribution and assimilation will, it is understood, be treated elsewhere in the present series of articles. Language is of kindred interest. There is space for reference in the present outline to only one such topic—selected for its incidence upon what is by many considered the most important problem of the immediate future—namely, the relative trend of urban and rural increase.

URBAN INCREASE

Canada is predominantly an agricultural country, yet it has reached the

point where its town dwellers all but equal the numbers upon the land. Indeed it has probably passed that stage, as the census reckons only fully incorporated villages and towns as "urban." Yet only forty years ago the towns and cities of Canada accounted for but 14 per cent of the people, and at the beginning of the present century the percentage was only 37. The expansion of 1900-1910 as already remarked, though based on the opening of the West to agriculture, was no less remarkable for the growth of the cities—in fact the urban increase of the decade was more than double the rural (1,258,645 compared with 574,878), whilst the proportion of city population to the total moved up from 37 to 45. That after the initial settlement of a new country there should follow a period of town development to meet its business needs is natural enough—such was the experience in earlier Canadian history—but that urban growth should parallel and "overshoot" rural in a period like

POPULATION OF FIFTEEN LARGEST CITIES OF CANADA, 1891-1921

CITÉS, VILLES ET VILLAGES	PROVINCES	POPULATION			
		1921	1911	1901	1891
Montreal, c.	Quebec.	618,506	490,504	328,172	219,616
Toronto, c.	Ontario.	521,893	381,833	209,892	181,215
Winnipeg, c.	Manitoba.	179,087	136,035	42,340	25,639
Vancouver, c.	Br. Columbia.	117,217	100,401	27,010	13,709
Hamilton, c.	Ontario.	114,151	81,969	52,634	48,959
Ottawa, c.	Ontario.	107,843	87,062	59,928	44,154
Quebec, c.	Quebec.	95,193	78,710	68,840	63,090
Calgary, c.	Alberta.	68,305	43,704	4,392	3,876
London, c.	Ontario.	60,959	46,300	37,976	31,977
Edmonton, c.	Alberta.	58,821	31,074	4,176	.....
Halifax, c.	Nova Scotia.	58,372	46,619	40,832	38,437
St. John, c.	N. Brunswick.	47,166	42,511	40,711	39,179
Victoria, c.	Br. Columbia.	38,727	31,660	20,919	16,841
Windsor, c.	Ontario.	38,591	17,829	12,153	10,322
Regina, c.	Saskatchewan.	34,432	30,213	2,249	.....

that of the settlement of the West is significant of much in recent Canadian history. To enlarge upon this: Ontario and the three Maritime Provinces actually lost in rural population during the decade 1901-1911. The loss was in part a movement of farmers towards the new western lands, but it was also a trek downwards, and particularly to the larger cities. In 1901 only 12 per cent of the Canadian population was in cities of over 50,000 people; in 1911 the percentage was 18, whilst the ten largest cities alone absorbed more than half of the entire urban gain of the decade. Not all of this accretion came from the land, for at least 150 small towns and villages lost population.

DECLINE IN RURAL SECTIONS

The same tendencies have been at work in the decade just closed, though only Nova Scotia, Prince Edward Island and Quebec have declined in actual numbers of rural population. Nova Scotia's total gain as a province is largely accounted for by Halifax, Sydney, and the Pictou section. In the older parts of Ontario a score of counties have declined, and so have the majority of the small towns and

villages. One half of the entire growth of the province is in Toronto and the surrounding district, and most of the remainder in Hamilton, the towns adjacent to Niagara power, the Windsor group of cities in the West and Ottawa in the East. Montreal, Three Rivers and Sherbrooke form the counterpart for Quebec, with some rural growth in Chicoutimi-Saguenay and Pontiac corresponding to similar expansion in New Ontario. In the West, Manitoba is depleting her small towns to feed Winnipeg and St. Boniface, which two account for one third of the provincial increase, though there has been about an equal increase upon the land. Saskatchewan and Alberta similarly are building up their cities, but are also increasing their rural population, though somewhat less rapidly from a relative standpoint. In British Columbia, Vancouver and Victoria account for 30,000 increase of a total of 132,000, but there has been growth upon Vancouver Island. For those who wish to pursue the subject further, tables are added showing the rural and urban populations of the several provinces over the past forty years and the growth of the fifteen largest Canadian cities during the same period.

The French Canadians in the Province of Quebec

By G. E. MARQUIS

Provincial Statistician, Quebec

Translated by Louis Allen, Ph.D., University College, Toronto

ORIGINS

THE ancestors of the French Canadians came from the northwest of France, chiefly from Normandy, Perche, Beauce, Maine, Anjou, Touraine, Poitou, Aunis, Angoumois, Saintonge, and part of Gascony. Nineteen twentieths of this population were derived from the above-mentioned provinces, and not from Brittany, as has often been stated. New France, during her infancy, required tillers of the soil, and Brittany produced, properly speaking, only fishermen. These tillers of the soil could come only from the provinces having sea-port connections with Quebec. It was vessels sailing from the ports of Dieppe and Honfleur, from the mouth of the Loire, from Rochefort and La Rochelle, that brought us these tillers of the soil, each one of whom could also ply a trade, such as joiner, cabinet-maker, wheelwright, miller, blacksmith, etc. Let it be noted further that no prisoners, civil or criminal, were sent out.

The young women sent to the colony, in the time of Colbert, were at first selected in the orphanages of Paris, and later, in the diocese of Rouen. It was Madame Bourbon, wife of the former attorney general, who devoted herself to this work. All our historians have victoriously refuted certain scandalous stories concerning these young women, and due to the imagination of Baron Lahontan. So pure and so free from all taint are our origins that we have not the least hesitation in indicating the sources where they

may be studied at first hand and in all their intimate detail. By the aid of the archives of the parishes of Quebec and Montreal, and of the records of the notaries, it is possible to trace the origin, the genealogy and the state of fortune of each one of the immigrants (men or women) coming to Canada during the course of the seventeenth century. Benjamin Sulte affirms that from 1634 to 1759 there came from France not more than 4,000 individuals. Before that date, 1634, scarcely 300 French immigrants had come to Canada. The Abbé S. Lortie claims that at most 5,800 French immigrants, arriving in Canada from 1608 to 1760, were the parent stock of the French race in America.

These 5,800 sons and daughters of France have attained and spread over all of North America, in the space of three centuries, the almost miraculous figure of 3,500,000 souls, a population six hundred times greater than the number of the original colonists.

THE FRENCH RÉGIME

The companies entrusted by the Kings of France with the settlement of Canada, in return for which they received certain privileges, which were granted to them during the first half century of this period—that is from 1612 until 1663 (Companies of Rouan, Montmorency and of the One Hundred Associates)—brought out few colonists, for the population at the time of the census of 1665 was only 3,215. The *seigneurs* contributed notably to the establishment of colonists on the banks of the St. Lawrence, on the *Ile d'Or-*

léans, etc. In 1663 a viceregal government was established at Quebec. The following year, however, the King of France handed over all the French possessions in the American hemisphere to the Company of the West Indies, a company that was in its turn to be suppressed by Frontenac upon his arrival in 1672.

It would be too long an undertaking to follow here all the developments of the French colony during the course of the period extending from 1608 to 1760. Let us simply recall that the beginnings were full of hardship, and that our ancestors had to fight against the Iroquois Indians from 1608 to 1700. As it was difficult for the colonists to devote themselves to the cultivation of the soil because of the constant danger of being attacked by the Iroquois, the progress of the colony was slow, especially during the seventeenth century.

ENTRANCE OF THE ENGLISH

But the conflict with the Indians was not yet entirely settled when a new enemy pounced down upon New France and attempted to seize it for England. The unsuccessful attack on Quebec made by Admiral Phipps in 1690, and the later attempt of Admiral Walker in 1711, were the prelude to the new struggle. At all points at once hostilities began between the Canadians and the English, and the French posts scattered over the whole American continent, from Hudson Bay to Louisiana, and from the Great Lakes to the Atlantic, soon fell one after another into the hands of the English.

By the Treaty of Utrecht in 1713, which ended the war between France and England, Louis XIV was forced to cede to his rival a part of his possessions in America, including Acadia, Newfoundland, Hudson Bay and the

country of the Iroquois. Later the French regained possession of Acadia, only to be again dispossessed of it in 1745, and from this time the English were determined to seize all the French possessions in America. The deportation of the Acadians in 1755, under the pretext of disloyalty to the British Crown, is a dark page in English annals, in no wise justified by the neutral attitude of this peasant people. But a part of the Acadians returned, and today they number nearly 200,000 in the Maritime Provinces, and at least 100,000 in the United States, or scattered over the eastern part of the province of Quebec.

In 1760 France abandoned the American colony to its fate, and the English, having the advantage of numbers, attacked New France from three sides at once; the Great Lakes, the river Richelieu, and the St. Lawrence. The city of Quebec was the last French possession to resist. Wolfe and Montcalm, the generals commanding the English and French armies, were both killed in the same battle on the Plains of Abraham. This was in the autumn of 1759. The defeated French army fell back on Montreal. The following spring, wishing to retrieve his loss, Lévis marched to besiege Quebec and succeeded in putting the English to flight in the battle of Ste. Foy. But upon the arrival of English reinforcements Lévis was obliged to withdraw and soon after the Capitulation was signed by the Marquis de Vaudreuil at Montreal. The *fleur-de-lisé* sailed back over the sea, but almost the entire French population remained in the country, with its clergy, its nobility, its *seigneurs*, ruined but not discouraged.

AFTER THE CONQUEST—(1760)

It has often been affirmed that only the peasant class remained in the

country after the Cession in 1760, and that the educated class abandoned it to its fate. Nothing is farther from the truth, as we have just shown, and those who have doubts in the matter, if they wish to be convinced, have only to run through the work on this subject by Judge Baby, *l'Exode des classes dirigeantes à la cession du Canada* (The Exodus of the Ruling Classes at the Time of the Cession of Canada), as well as *l'Histoire des Ursulines*, published in 1833, and also *l'Histoire des grandes familles du Canada*, by the Abbé Daniel, a priest of the Order of St. Sulpice.

Approximately 60,000 Canadians were at that time grouped around Quebec, Three Rivers, and Montreal, including also the settlers scattered along the banks of the St. Lawrence and its numerous tributaries. The first English Governor of Quebec, Murray, in a report concerning the government of Quebec in 1762, wrote of the inhabitants of the colony in the following terms:

They belong to a strong and vigorous race; they are virtuous in their morals and temperate in their manner of life.

If they are convinced that they have no need to fear deportation, and that they will enjoy the free exercise of their religion,

they will become good and faithful subjects of His Majesty, and the country that they inhabit will be before long a rich and very useful colony of Great Britain.

Murray's successor, Lord Dorchester likewise, makes the following statement:

The Canadian stock, whose roots are already so vigorously prolific, will end by peopling this country to such a degree that any new element transplanted into Canada would find itself entirely submerged and disappear, except in the cities of Quebec and Montreal.

Here we have testimony above all suspicion, and if, in the course of later years, the Canadians are obliged to struggle against a handful of bureaucrats who wish to reduce them to servitude and to deprive them of the rights guaranteed by the Capitulation of Montreal, rights ratified three years later by the Treaty of Paris, it must not be believed that it is from a spirit of insubordination that our compatriots resist, seeing that these struggles have obtained for Canada the parliamentary régime that we enjoy today, and since in each controversy, when their rights were infringed upon, it was sufficient for them to carry their complaints to the foot of the throne to obtain justice. Ruined, but not discouraged, as we have already said, the Canadians, on the morrow of the Conquest, resumed their cultivation of the soil and, grouped in parishes under the wise and enlightened guidance of their curés, they rapidly waxed in numbers, if not in wealth.

The demographic statistics, the compilation of which has always been entrusted to the clergy of the province, non-Catholic as well as Catholic, reveal a very high birth-rate among the French Canadians, although this birth-rate has appreciably diminished since the beginning of the present century. The following are a few examples: from 1660 to 1670 this birth-rate was 63.0 per 1,000; from 1700 to 1710, 56.8 per 1,000; from 1760 to 1770, 63.3 per 1,000; from 1830 to 1840, 60.1 per 1,000; from 1870 to 1880, 47.3 per 1,000; in 1900 it had fallen to 34.4 per 1,000; finally, in 1920, the birth-rate was 33.3 per 1,000. The coming into the country, after the cession, of new racial elements has largely contributed towards the lowering of the birth-rate, as the newcomers are less prolific than the settlers of French origin.

HARMONY

The brevity of this sketch does not permit us to emphasize many interesting facts in connection with the English domination, therefore we pass without further delay to the years that more directly concern us. Since Confederation in 1867 the greatest harmony has reigned in the province of Quebec, and everywhere a friendly competition has been maintained among the various elements of our population. The *habitant* of Quebec still continues to wrest the land from the wilderness, and to cultivate it. A certain number of our compatriots have emigrated to the United States, especially following the War of Secession (1866)—half a million perhaps, and probably constitute today a scattered population of nearly 1,000,000 individuals. This exodus ceased about forty years ago, and a considerable number of our compatriots are returning to their native land. During the last twenty years a great many new districts have been opened up to colonization and have been cleared; they are today intersected by railways, which, by promoting commerce and industry, bring prosperity.

GROWTH AND EXPANSION

Penetrating into the interior, the railways have brought about groups of population, and today one sees industrial centers developing and furnishing employment for the surplus population of the longer settled regions, where the land has all been cleared. The urban population slightly surpasses the rural population: out of 100 inhabitants of the province there are 52.8 in the cities and 48.2 on the land, according to the municipal reports. But it should be added, to

be exact, that the city of Montreal alone, out of an urban population of 1,340,561 for the province, has no less than 618,506 inhabitants, or nearly 50 per cent of the total. The growth of the population in the province is due to the excess of births over deaths, and by no means to immigration; practically all attempts at colonization by European immigrants have failed; only the Canadians have the courage and the endurance required for clearing a farm in the woods and converting it after a few years of hard labor into fine cultivated land.

During the year 1921 there were registered in the province 84,740 births and 33,433 deaths, giving a natural increase of 55,316 inhabitants. The birth-rate for the same year was 37.57 per 1,000, the death-rate 14.15 per 1,000, giving an annual increase of 23.42 per 1,000. The infantile death-rate (0 to one year) was in 1921, 113 per 1,000 children born alive. These figures explain the rapid growth of the French Canadian population. Families of 10, 12, and 15 children are still not uncommon among our people, and formerly were quite general. In 1890 the Mercier Government had a law passed by the legislature, providing that every father of a family having 12 living children should receive from the Government a free grant of 100 acres. In 1904 a report on the results of this provision published the names of 3,395 families which, within a period of 13 years, had taken advantage of this land-grant; in 1906 a supplementary report added 2,018 other names to the list of beneficiaries, making a total of 5,413 families having at least 12 children.

This law was repealed in 1905 because all the public lands were threatening to fall into the hands of these enterprising fathers, humorously,

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so declared recently the present prime minister of the province, the Honorable M. L.-A. Taschereau.

EDUCATIONAL FACILITIES

For the benefit of those who might be tempted to believe that education is neglected in Quebec, and that we are more concerned with having large families than with properly rearing and educating them, we can state that between the ages of seven and fourteen nearly all children attend school. The province has no fewer than 7,733 schools, taught by a staff of 19,704 teachers, men and women, and laymen as well as members of the religious orders. In the religious orders 8,591 are classed as teaching for a salary varying from \$100 to \$250 per year, and this accounts for the fact that the average cost of education is so low in the province, namely \$40.35 per head, while it would cost at least double that amount if the teachers of the religious orders were paid as are the laymen. Quebec has four universities, attended by 5,428 students; 21 classical colleges, in which are enrolled 9,502 pupils; in short our schools are attended by 548,251 pupils, out of a total of 664,509 of school age. The average attendance, according to the enrollment, is 77.41 per cent, while for the whole of Canada it is 67.83 per cent. Ten years ago \$6,210,000 were expended for public instruction in the province; today the amount expended is \$22,123,000 by the government and the municipalities.

AGRICULTURE AND INDUSTRY

From the agricultural and industrial viewpoint we are making equally rapid progress, as the following figures show: In 1911, in the province of Quebec, the crops were valued at \$76,325,000; in 1920 they had attained

the value of \$330,217,000. During the same period the value of the domestic animals rose from \$94,926,000 to \$206,814,000; that of our dairy products, butter and cheese, from \$15,650,000 to \$37,000,000. In 1910 our factories, 6,584 in number, had an invested capital of \$326,946,925 and a production of \$350,901,656, while in 1919, according to the latest figures published, the factories numbered 11,061, with an invested capital of \$936,712,125 and a production of \$988,433,364. This gives some idea of the progress made in a decade, and bears witness to the activity of the French Canadians, who at the same time remain attached to their traditions and to an ideal, which is in no way at variance with the aspirations of those by whose side they are advancing in the province, as in the Dominion.

POPULATION

For 1921, the population of the province of Quebec was 2,361,199, according to Federal Census. When Canada was ceded to England in 1760 we were about 60,000 in number. At that time the population of France was 20,000,000. The latter has not yet doubled, while the inhabitants of Quebec have multiplied more than forty times in Canada alone. Presuming that the population of Quebec will be doubled every thirty years, we shall have nearly 25,000,000 at the beginning of the twenty-first century.

A prominent English-speaking Canadian, writing in the *London Tablet* for January 22, makes the following statements:

As a result of its fecundity, the French-Canadian population has grown from 75,000 at the Conquest in 1760 to an estimated number of 3,400,000 at the present day, distributed as follows: In the province of Quebec, 1,958,000; in the other provinces

of Canada, 442,000; and in the United States, 1,000,000. These figures, it is true, include all persons of French origin, but subsequent immigration to Canada has been negligible. From the United States figures, however, a substantial deduction should no doubt be made for persons who are not of Canadian origin. Further, in the last available returns the decennial rate of increase of population in Quebec is given as 21.45 as against 15.59 in Ontario.

The French Canadians are solidly Catholic, despite the large sums that Protestants have for many years been spending annually for the "evangelization of Quebec." The population of the province is 80.5 French-speaking and 86.2 Catholic. There are no atheists among them, as there are in France.

It has been the fashion among Protestants to refer to Quebec as the "backward province," but it is beginning to dawn on even the bigots that it is, in most respects, the foremost and best-governed province in the Dominion. Its credit is certainly better than that of any other province, since its bonds sell at a higher figure than those of any of the others, even higher than those of the Dominion itself.

Canadians of French origin do not look on themselves as French, nor do they ever apply to themselves the designation "French Canadian" by which they are universally known among English-speaking people. To themselves they are simply "Canadians."

The French Canadian, it is true, is rooted to the soil by three centuries of history. He still loves France, his former mother country, but France is

not his old country *home*, and he is never heard to speak of returning there. He was the first pioneer on American soil and he will be its last defender against any invader.

LANGUAGE

The language spoken among the educated classes is the same as that heard in France in the same *milieu*. As for our peasants, we grant that in their speech they make use of archaisms and of expressions sometimes obsolete; but gather together French Canadians from ten different localities, not only from Canada but also from the United States, and all will understand one another at once, because there is a uniformity of language among them—with the exception of a certain number who have lived in the United States and whose language is contaminated with anglicisms. The same cannot be said for the French peasant, since nearly 20 per cent of the conscripts reporting for military service speak only a patois and do not understand a word of French; and since, moreover, the French peasants living in two neighboring *departements* are often unable to understand one another because of the difference of dialect.

In the sixty rural counties and the one hundred and nine cities and towns of the province of Quebec all our people understand one another, and are understood by the French, provided the latter speak—French.

The French Canadians Outside of Quebec

By THE HON. SENATOR N. A. BELCOURT, LL.D., K.C., P.C.

The Senate, Ottawa

THE descendants of the 60,000 French peasants and artisans grouped here and there along the banks of the River St. Lawrence, who were ceded by France to Great Britain by the Treaty of Paris (1763), now number over 4,000,000. There are 2,000,000 in the province of Quebec, 1,750,000 in the United States of America and 650,000 scattered in the other provinces of the Dominion.

This marvelous growth, accomplished through many trials and vicissitudes, notwithstanding grave and almost permanent handicaps, even deportation in the case of the Acadians, without any assistance material or moral from the outside, is due to the natural qualities and aptitudes and, more especially, the fecundity of the race and its persistent observance of the divine injunction to grow and multiply.

ROMANCE OF THE CANADIAN PIONEERS

Canada's pioneers were almost to a man crusaders of civilization and Christianity. Their vision, ambition and zeal induced them to take in the whole of the North American continent as the field of their endeavors and activities.

French Canadians traversed the interior of this Northern Hemisphere, in almost every direction, when it was nothing but an immense solitude and in all its wild and primitive beauty.

Jacques Cartier, Champlain, de Maisonneuve, Joliet, La Salle, Talon, Frontenac, de la Vérendrye, de Laval, and their coadjutors and successors aimed to build and maintain an em-

pire, French and Catholic, extending from Hudson Bay to the Gulf of Mexico. The record of bravery, audacity and endurance, sublime abnegation and supreme devotion, as well as the exploits of the French, both lay and clerical, in America, is as entrancing, as engrossing and as inspiring as the most romantic epic of any age or clime.

No Greek, Roman, French or English fiction contains anything more heroic than the actual doings of these pioneers and missionaries.

Their explorations, their settlements and missions embraced the great waterways and lakes, outside of the territory occupied by the original thirteen American colonies. One needs only to look at the map of North America of the middle of the 18th Century to apprehend at a glance the magnitude of the work then already accomplished by these empire builders. Only the want of vision, the improvidence, indifference and dissoluteness of Louis XIV and Louis XV and their Courts arrested first and finally put an end to the ambitious hopes and well-laid plans of the sons of France to insure for her the predominant rôle on the North American continent.

If time permitted it could be conclusively shown that the most of the great industries which have permitted Canada's development had their beginning under the French régime—so much so that the great Intendant Talon could truthfully say, as he did, that New France had become self-supporting through its own industrial efforts.

WIDE EXTENT OF FRENCH SETTLEMENTS

When the battle of the Plains of Abraham was fought the pioneers of New France had erected, outside of what is now the province of Quebec, many important and strategically chosen settlements, such as Oswego, Frontenac (now Kingston), Cataracui, St. Joseph, Sault Ste. Marie, Detroit, New Orleans, Mobile, Chicago, Bourbonnais, Forts Duquesne, Saint Frederic, St. Charles, St. Pierre, Maurepas, Rouge, La Reine, in Manitoba and the Northwest, and others in Illinois, Missouri, Michigan, Minnesota, Wisconsin, Ohio, Dakota, Colorado, Arizona, New Mexico, Oregon, Louisiana, California, in New York and the New England States. These settlements have now become great and prosperous cities and towns and most of their original names have survived. The French were the first colonists in every one of the nine provinces that now form the Canadian Confederation.

AFTER THE FALL OF QUEBEC

After the fall of Quebec the French colonists decided that they must live, endure and multiply. They had traditions, a language, a culture and a faith which they had brought to and implanted in the New World, which they would not forsake, of which they constituted themselves the guardians. Their attachment to Canadian soil was the main reason why they remained in Canada and accepted the new régime, regretfully at first no doubt, but none the less loyally. Relieved of the exactions of the last period of French dominion, impoverished and harassed by constant wars, craving for peace, they quietly and contentedly settled down to the tilling of their farms; and they prospered and multiplied.

With these descendants of a race of

discoverers and explorers, the spirit of adventure, the desire to see and exploit new territory persisted, and not more than fifty years after the Conquest they renewed their quest for new fields and founded new settlements. Today there is no province of Canada and no state of the American Republic where they are not to be found, as the Official Census and other records show.

It is to be noted at once that the last official figures at our disposal are those of the Census of 1911; those of 1921 not having yet been published.

The following table, based on the Census returns of 1911, with a conservative estimate of the increase during the last twelve years, shows the present French population of North America and where it is located:

Province of Quebec.....	2,000,000
United States.....	1,750,000
Ontario.....	300,000
New Brunswick.....	124,000
Nova Scotia.....	55,000
Prince Edward Island.....	12,000
Saskatchewan.....	40,000
Manitoba.....	35,000
Alberta.....	28,000
British Columbia.....	12,000
Yukon and Territories.....	2,000

Leaving aside the 2,000,000 French Canadians residing in the province of Quebec and the 1,750,000 in the United States, the remainder, about 650,000, are located in small or large groups in the other provinces of Confederation, as indicated in the foregoing table. The increase is due to nativity, unaided by outside accretion, as emigration from France and Belgium to Canada practically ceased with the Conquest.

It is not proposed to deal here with the largest group of French-speaking Canadians forming four-fifths of the population of the province of Quebec, but only of the smaller groups outside that province.

EXODUS TO THE UNITED STATES

In 1834 began the exodus of many Canadians to the United States, which quickly increased in volume, which about 1875 had assumed alarming proportions and which, whilst it at times slowed down, has never really ceased; it has added 1,750,000 of French and probably 1,000,000 of English-speaking Canadians to the population of the United States.

Though by far the greatest number of these newcomers from Quebec settled in the northeastern states, and along the Atlantic coast, some of them found a home in other parts of the American Union. In 1900, about 75 per cent are to be found along the Atlantic, 20 per cent in the North central regions, 3 per cent in the West, 2 per cent in the South. The proportion in the West is probably now at least 10 per cent. About 40 per cent then lived in the cities and the other 60 per cent on farms. The proportion in the cities has since considerably increased, with the result that it is now 50 per cent on the farms and 50 per cent in the cities. The main cause of so many departing from their native soil arose out of the industrial and financial crisis which prevailed under the union of Ontario and Quebec, as well as the hope or expectation entertained by them of receiving good wages in the factories and other industries of the eastern states. Many of the French Canadians hoped, in fact, to earn enough to liberate their properties from indebtedness, and to resume some day the tilling of their Canadian farms. Besides, the traditional love of adventure had not wholly died out.

Owing to the indifference or want of action on the part of Canada's governmental authorities to arrest the exodus, and later to take steps to bring back those who had left, and in part to the

liberality and good treatment extended by state and other authorities, as well as by the people generally, to the newcomers, the latter accommodated themselves readily to their changed environment and most of them gave up all idea of *trekking* back north. We know that very few, if any, of the English-speaking emigrants from Canada to the United States had upon leaving any such intention and the records do not show that any considerable number of these have permanently returned.

The sporadic and unsupported efforts made to repatriate them were generally fruitless. Hence the deplorable fact for Canada that today there are about 1,750,000 Canadians of French speech and not less than 1,000,000 of English-speaking Canadians who have been lost to Canadian citizenship. Whilst there is reason to hope that a not unimportant number of French Canadians may be induced to return, apparently no such hope can be seriously entertained with regard to the other Canadians who have left us.

PART RETURN TO CANADA

During the last few years, however, a considerable number of French Canadians returning from the United States, as well as a large number belonging to the older parts of Quebec, have established themselves in the western provinces and New Ontario and more particularly along the rich clay belt traversed by the Canadian National Transcontinental Railway.

They are engaged in the task of clearing vast areas of excellent agricultural land, a task for which they are eminently qualified, better prepared than almost all other present or future citizens of Canada, a task which is bound to be profitable to themselves and of great benefit to the nation at large. They have assumed, unconsciously no doubt, the work of bridging

the chasm between the East and the West and filling up the gap caused by 1,200 miles of heretofore supposed swamp and desert.

These French settlements for many hundreds of miles upon the clay belt of Ontario will in time justify the building of the Government Transcontinental Railway.

WHERE LOCATED AND HOW ESTABLISHED IN THE STATES

The 1,750,000 French Canadians living in the United States are located in groups greatly varying in number. They founded Chicago, St. Louis, St. Paul, Dubuque, Milwaukee, Detroit, etc. They are located mainly in the states of Vermont, New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, New York, Michigan, Minnesota, Wisconsin, Illinois, Montana, Washington, California, etc.

In the cities of Woonsocket, Providence, Fall River, New Bedford, Worcester, Biddeford, Manchester, Lewiston, Haverhill, Lowell, Lawrence, Southbridge, Springfield, Holyoke, etc., they are in some instances the predominant element, a majority in certain others and in the rest a considerable proportion of the total population.

Employed on arrival almost exclusively in the cotton, shoe and other factories, a considerable number, however, entered into the commercial, industrial and professional life of their adopted country, first as mere employees, and as soon as they could secure the initial capital, on their own account, with the result that they have acquired and now control an important part of the business and professional life of these states. Many hold prominent posts. They enjoy generally the respect and esteem of their neighbors, most of them are

prosperous and not a few have become wealthy.

In 1900 there were 84 per cent of them nationalized and no doubt today nearly all of them are.

NATURAL ADAPTABILITY AND GROWTH

In order to preserve and perpetuate their racial characteristics, traditions and religious faith, they promptly set themselves to the work of erecting churches, schools, convents, hospitals, benevolent and literary institutions or societies; they founded and generously supported newspapers published in their maternal tongue; they readily took the oath of allegiance to the Republic and have always manifested a deep interest in all matters affecting the well-being of their new country, their locality and their home; they have become thoroughly loyal and good American citizens, an integral, important and progressive part of the Great Republic.

With that adaptability conspicuously early and many times displayed by their ancestors, after the substitution of the British for the French régime and forms of government, these new American citizens proceeded to secure for themselves the use and enjoyment of the benefits to be derived from the free and democratic laws and institutions governing them in their new homes. They at once entered freely and with zest into the public life of their respective community, state, city, town or village, seeking and obtaining an always increasing representation in the municipal council, in the state legislature, in Congress, and in several instances, at the very top of the state. The cities and towns which they have created, the parts which they have developed, as well as their general good standing, are convincing evidence of their adaptability, intelligence, courage and determination to

secure for themselves the advantages and influence which they enjoy under the aegis of the Star Spangled Banner. All this, with their natural fecundity and willingness to multiply, undoubtedly afford ample promise of their rapid and substantial advancement.

MIGRATION TO ONTARIO

Early in the 19th Century the migration from the province of Quebec, then known as Lower Canada, into Upper Canada, commenced and was at first directed to the county of Glengarry. But it was not until 1830 that this migration became more extensive in Ontario and commenced to flow into Manitoba and the western provinces, where many French groups are made up almost exclusively of the sons, grandsons and great-grandsons of the French migrants of 1830. Exception, however, must be made of about 4,000, whose settlement in the western part of Ontario, mainly in the counties of Essex and Kent, dates back to the days of the early French explorers and fur traders, just about the time the French founded Lamothe-Cadillac, now the great city of Detroit. This group was soon considerably increased by newcomers from Quebec, and in 1867 its population numbered 13,400 souls and now aggregates at least 33,000.

At the time of the Union of Upper and Lower Canada (1841) the French Canadians in Upper Canada numbered about 14,000 out of a total population of 455,688; had increased to about 33,000 in 1861; 75,000 in 1871; 102,000 in 1881; 202,000 in 1911. In 1923 it must be nearly 300,000. The 14,000 of 1841 have in 60 years become 300,000, thus constituting today more than one-tenth of the total Ontario population. There is not a county in Ontario where some of them have not permanently located.

The following table shows in what counties their largest groups were to be found in 1911, the figures for 1921 not being available:

Carleton, including the city of Ottawa.....	26,367
Nipissing.....	26,277
Russell.....	22,475
Prescott.....	20,124
North Essex.....	14,078
Algoma East.....	11,571
Glengarry.....	8,710
Essex South.....	7,655
Simcoe East.....	6,357
Kent West.....	4,917
Thunder Bay and Rainy Bay....	4,731
Renfrew South.....	3,149
Renfrew North.....	2,958
Algoma West.....	2,776
Hastings East.....	2,144
Parry Sound.....	2,188

COURAGE AND ENERGY SPUR TOWARDS DEVELOPMENT

As previously pointed out, the French Canadians of Ontario, with the exception of the then small settlement in the counties of Essex and Kent and the few settlers from France and Belgium came from the province of Quebec. Though the migration to Ontario began early in the 19th Century, they numbered only 14,000 at the date (1841) of the Union of Upper and Lower Canada. Mainly drawn from the agricultural class, they took up lands along the banks of the Ottawa River, beginning with the counties of Prescott and Russell. Because the best farming lands, those situated on the plateaux, had then practically all been taken up, the only ones which they could acquire were the low and swampy lands. The courage shown and the energy and labor expended by them in developing and rendering this soil very productive have been frequently lauded. Their number in Prescott was, in 1911, 20,124 out of a total population of

26,968; in Russell 22,475 out of a total of 39,434; many parts in both counties being in appearance and in fact as typically French as most of those of the province whence they came originally. Notwithstanding the handicaps already referred to and others which need not be mentioned, their progress and prosperity will compare favorably with that of their neighbors of different races.

Following the course of the Ottawa River and reaching the Capital we find that in 1911 the French Canadians formed one-third of the population, 22,210 out of 73,193. The Census figures of 1921 will show that they have there largely increased since and in greater ratio than the rest of the population. Proceeding further to the counties of North and South Renfrew they composed in 1911 more than one-third of the total thereof; this proportion is considerably increased as we reach Mattawa and its neighborhood. At this point the line of settlement divides itself into two distinct lines, one extending towards Temiscamingue, where settlement conditions are found very favorable for both agricultural and mining purposes. The other line follows the shores of Lake Nipissing pushing directly to the west and taking in the prosperous and quickly developing centers of Sturgeon Falls, Sudbury, Blind River, Sault Ste. Marie, North Bay and the surrounding country. It then moves to the south along Georgian Bay and Lake Huron, where also important and growing French establishments are to be found.

Towards the south on the St. Lawrence River and reaching the county of Glengarry one comes upon the scene of the earliest migration from Quebec. In 1911 the French numbered 8,710 out of 21,259 and now constitute very probably one half of the whole.

Of special interest are the French establishments in the counties of Essex and Kent, situate at the southern extremity of Ontario, originally begun in the early days of French exploration and fur trading. Because of the clemency of the climate, and the great fertility of the soil, these settlements quickly developed and today have become very prosperous. Outside of the city of Windsor and smaller towns, most of the inhabitants are engaged in cultivating the soil with intense and most modern methods and harvesting large quantities, and of the best quality, of farm products, fruit, tobacco, etc. They have for a long time exploited and now control the profitable fishing grounds afforded by the waters of Lakes Erie and St. Clair and the Detroit and St. Clair Rivers.

Besides there are many growing French establishments in the counties of Simcoe, Welland, Hastings, Thunder Bay, Rainy River, Parry Sound, Muskoka, Stormont and others.

GENERAL HIGH STANDING

Whilst the general social and economic conditions of the French Canadians throughout Ontario are and must remain for a time inferior to those which prevail as a rule in the province of Quebec, because nearly all of them belong to the pioneer class, because they were late in coming into the province after the best lands had been taken, and the control of industry and business acquired by others, and especially because of the usual want of capital of the pioneer, it must be and it is generally conceded that they have accomplished a great deal. They are progressing satisfactorily, have demonstrated their superiority as colonizers, and are giving promise of materially aiding the development and prosperity of Ontario. They have carried with them and generally put

into practice their innate disposition to mind their own business, live in peace and harmony with their neighbors, and evenly pursue the tenor of their way.

In the city of Ottawa, where they constitute one-third of the population, they hold an important position in business, in the civil service and in the intellectual and artistic domain.

EVIDENCES OF EARLY NATIONAL TRAITS

Perhaps the most interesting and significant phase of the migration from Quebec into Ontario and the repatriation of the French from the New England States, is the settlement already alluded to, of many French Canadians in New as well as Northern Ontario, especially upon the great clay belt of the province which is traversed by the Canadian National Transcontinental Railway. Begun but a few years ago and notwithstanding three most devastating conflagrations and consequent incalculable loss, the development of the northern part and the new part of Ontario has proceeded with remarkable speed.

And to what is that directly and immediately traceable? Is it not another manifestation of that traditional spirit of adventure, the desire to open up new lands to cultivation, which is so characteristic of the French Canadians? Is it not another evidence of the courage and the will, as well as the ability, to turn the forest into growing fields? Is it not making two blades grow where only one grew before? And are there any other people as able and as willing to undertake and satisfactorily carry out this great work? If the French Canadian does not do it, who will? One illustration will be sufficient. The government of Ontario, with the coöperation of the Fed-

eral Government, during the year 1920 placed about 300 returned soldiers in and around Kapuskasing. They were given free land ready for cultivation, with buildings thereon and an advance in money and provisions.

In the fall of 1922 most of these would-be settlers had left. A special commissioner was appointed by the Ontario Government to straighten out the confusion and failure resulting from this fiasco. Only a few months ago the commissioner reported that every one of these soldiers had abandoned the lands and that about an equal number of French Canadian farmers had taken them up, and were evidently making the very best use of their opportunity. They have paid for the land and the buildings, though they received no advance in cash, in provisions or otherwise, and set themselves resolutely and methodically to the task of exploiting their new acquisitions.

MARITIME PROVINCES

As in the other provinces of Canada, the French were the first settlers in the Atlantic provinces.

The foundation in 1605 of Port Royal, which became Annapolis in 1708, was in reality the first settlement in North America north of St. Augustine in Florida. The following year an English colony was begun in Virginia, to which the name of "Old Dominion" was given; then we have the foundation of Quebec in 1606, and it was not until 1621 that Sir William Alexander started the first English-speaking colony in Canada, partly in Acadia and partly in Cape Breton.

For a century after the foundation of "Acadia," French and English inhabitants spent most of their time, most of their activities and energies in bitter rivalry, armed conflicts, and in

resisting the constant hostilities of the Indians.

Louisburg, many times taken and retaken, destroyed, rebuilt in part, remained all this time the storm center of the conflict. It was a period of war, strife, outlawry, buccaneering, attempts to found feudal communities, great disappointments and lamentable failures.

The inevitable result was very slow development until the coming of the 18th Century. Outside of the farming settlements of the French at Chignecto, Minas, Petitcodiac and a few others, there had been very little cultivation of the soil, confined to the rich alluvial lands bordering the tidal waters: no attempt being made to penetrate the forest.

In 1714 the whole population was less than 2,000 and in 1767 it was still under 12,000.

During this period of about 60 years Acadia was compelled to change allegiance many times: first, in 1708, when England gave up the whole of Acadia to France; then by the Treaty of Utrecht, 1713, France ceded it back to England along with Hudson Bay and Newfoundland, retaining, however, Prince Edward Island, then known as "Ile St. Jean" and Cape Breton in which the French built the great fortress of Louisburg.

Seventeen hundred and forty-five saw the surrender of Louisburg to the English, but by the Treaty of Aix-la-Chapelle (1748) it was returned to France. Then followed the cruel and wanton deportation of the Acadians in 1755, and shortly afterwards the final surrender of Louisburg to Amherst in 1758.

In 1783 Nova Scotia's population was nearly doubled by the arrival of 10,000 United Empire Loyalists, though some of them promptly went back to the United States or migrated into Ontario.

FINE CHARACTERISTICS OF ACADIANS

Some of the Acadians, against whom the decree of expulsion had been pronounced, managed to stay in or about Acadia mostly in hiding, and when the survivors of the deported came back, these men again took up the tilling of the Acadian soil and fishing along the coast and the banks. Notwithstanding half a century of persecution, terminating in deportation, they yearned for, returned to and clung to their native country. It is largely owing to their frugality, their power of endurance and of reproduction, as well as their thrift and attachment to the soil, that the population of Nova Scotia has not fallen off during recent years. The Acadians form more than 15 per cent of the total population of Nova Scotia.

During the War of the United States for Independence, in the face of strong propaganda and tempting offers, they preferred to forgive, and remained loyal to the Crown of Great Britain, just as they did in the War of 1812.

Before their expulsion they had established good farms, comfortable homes, beautiful gardens and had planted many orchards. They built the dikes in the marshlands. Today these lands are the highest priced in the whole province. Not only have they survived the "Grand Dérangement" and Lawrence's inhumanity; they have grown and prospered and they have forgiven, though they may not have forgotten.

NEW BRUNSWICK

There was no settlement of any account in New Brunswick prior to 1754, except in that small part of Nova Scotia which later on became part of New Brunswick. About 1767 Acadians in large numbers established them-

selves in Westmoreland, then Gloucester, Madawaska, Victoria, Kent and Restigouche. The Madawaska settlement in less than a century grew from 24 families to 24,000 persons. In the counties mentioned the people are very largely French and in the total population of the province their number is nearer one-half than one-third. It is owing to them that the population of New Brunswick has increased.

The New Brunswickers of French origin are taking an ever increasing share in the business, social and public life of the province. One of them has just been elected to the Premiership of New Brunswick.

They are prosperous, industrious farmers and fishermen; they form a happy and contented community, law-abiding and respectful of authority, living in concord and harmony with their neighbors of different race and creed.

PRINCE EDWARD ISLAND

In 1752 Sieur de la Roque took the census of what was then known as Ile St. Jean, now Prince Edward Island, and found 2,014 inhabitants, Acadians who had settled there but a few years before. He was much impressed with the fertility of the soil, though the settlers had made but little progress. His inspection was followed in the same year by those of one Thomas Pichon and of Sieur Franquet. The deportation of 1755 was followed three years after by the equally wanton and cruel expulsion of those colonists. With the exception of 30 families, all the Acadians on the island, probably 4,000 in number, were deported on transports totally unfit; most of them were lost at sea.

In 1764 Captain Holland found on the island only those 30 families who had escaped deportation, all of them being extremely poor.

From these families have grown

the 12,000 French islanders of the present day. They have steadily increased and now play an important part in the business and public life of the province, as is evidenced by the fact that a recent Prime Minister of this, his native province, is an Acadian who is now a member of its judiciary.

WESTERN PROVINCES

The immense territory with its gigantic mountains, its great rivers and lakes and its almost limitless prairies, "Les Pays d'en-Haut," out of which have been carved the Yukon, British Columbia, Manitoba and the latest provinces of Canada, Alberta and Saskatchewan, continued until the 19th Century to be the exclusive domain of the Indians, French Canadians and the offspring of the unions of the Indians with the early French discoverers, *coureurs de bois* and fur traders, a picturesque mixture whose nomadic instincts and habits have generally stood in the way of permanent settlement and rendered them the easy prey of the rapacious fur-trading companies. An official record now in the Record Office, London, shows that in 1767 the number of canoes licensed to carry on the fur trade over the immense territory covered by the Great Lakes, including practically the whole of the Northwest and even the Mississippi River, were owned and used in the fur trade almost exclusively by French Canadians. Out of 121 canoes so licensed in the year just mentioned 107 were owned and manned by them.

From the days when de la Vérendrye and his companions first contemplated the glories of the Rockies, when the French pioneers and Catholic missionaries carrying the old flag of France and the Gospel of Christ, first came to them, the Indians, the French Cana-

dians and afterwards the half-breeds were always the faithful friends and the sure guides of the intrepid discoverers and Catholic missionaries.

These missionaries, who always accompanied and often preceded the discoverers, soon acquired a very great influence which their successors still preserve. The sublime and heroic zeal, abnegation and devotion, the commanding spiritual and moral control exercised by the latter throughout the vast territory, have not been paralleled anywhere in this or any other part of the world.

But because these pioneers became the pawns of the great fur-trading companies and the victims of fire water and smallpox, their moral and intellectual improvement, as well as their material advancement, were very slow and never great.

INTERMARRIAGE

About the end of the 18th Century a large number of the employees of these companies were French Canadians. It was about 1790 that marriages between Canadians and Indians began. From these unions there were numerous offsprings, many of whom became the interpreters and guides of the English and French discoverers and geographers. They accompanied and served as guides to Mackenzie, one Beaubien and six French Canadians directing them down the Mackenzie River to its mouth in 1789, as well as Fraser and others in their northern explorations and discoveries; they themselves explored a large part of what was then known as Oregon and in which are now comprised the states of Montana, Idaho, Washington and Oregon, as well as British Columbia. For instance, in 1830, French Canadians whose names were Etienne Lucier, Joseph Gervais, Louis Labonté, Pierre Bélecque and other employees

of the Hudson's Bay Company, established themselves on the shores of the Willimanette River, in the vicinity of what is now the great city of Portland, Oregon.

HUDSON'S BAY COMPANY

The Hudson's Bay Company was founded by Pierre Esprit Radisson and Médard de Groseillers in 1670. The Northwest Company was organized in 1783. Nearly all its employees were French Canadians and the French language was the official language of the company.

When the Hudson's Bay Company later on acquired the sole and undisputed control of that immense territory, previously exploited by them and other fur-trading companies, it discharged at least half of the half-breed voyageurs then in its employ, and these, with their squaws, then settled along the banks of the Red and Assiniboine Rivers, especially in the neighborhood of Lord Selkirk's Scotch colony. At that date the population of the Red River settlements was about 10,000, composed for considerably more than a half of French Canadians and French Canadian half-breeds, the rest being English and Scotch half-breeds and some Indians. The real masters until that date were the French half-breeds; today they are fast disappearing as separate groups.

From the year of the acquisition of the territorial rights of the Hudson's Bay Company dates the migration of the French Canadians from Quebec and the return of many of them from the United States to Western Canada. Slow at first, it has steadily increased since. Their principal establishments extend all along the Red River to the American boundary, at Regina, Qu'Appelle, Woolsey, Forget, Montmartre, Gull Lake, Lac Pelletier, Villeroy, Note Dame d' Auvergne, Weyburn,

Estevan, Swift Current, Moose Jaw, especially Gravelbourg, and also in many other parts of Saskatchewan.

WORTH AND ABILITY AGAIN PROVED

In Alberta the French Canadians are located principally in Edmonton, St. Albert, Morinville, St. Paul, Rivière qui-Barre, Beaumont and particularly in the flourishing and exclusively French colony of Trochuvallee.

The respective populations of the provinces of Alberta, Manitoba and Saskatchewan are probably now not less than the following:

Alberta	33,000
Manitoba	42,000
Saskatchewan	45,000
Total	120,000

This is twice what the total population of New France was at the time of the Treaty of Paris.

In these provinces, by their industry, thrift and hard work, the French population has acquired wealth and is daily growing in importance and influence. They have settled in these parts permanently. They are there to stay, not as many of the other settlers, merely to temporarily exploit the land, to mine the farms, get out of them all that can be taken and then move elsewhere. They have proven themselves to be the best and most conservative pioneers of the Great Canadian West. They always have taken an active part in social, economic and political affairs. They have nowhere tried to shirk their proper share of public duty; they are striving to preserve their national characteristics and traditions, their religious faith and their maternal tongue. They have secured representation in the municipal councils, in the legislature, in the provincial cabinets and Parliament at Ottawa.

BRITISH COLUMBIA—YUKON TERRITORIES

There remains only to refer to the small groups of French Canadians aggregating about 14,000 disseminated throughout the vast territory comprised within Canada's province on the Pacific, the Yukon and Northwest Territories, which was the theater of action of many French Canadian explorers, discoverers and coureurs de bois and where they have left many traces of their passage and activity.

The space allotted by the editor to this chapter does not permit the writer to offer details or observations other than those which have already been given.

LASTING CONTRIBUTIONS OF A GREAT PEOPLE

Speaking generally of the different French Canadian groups, outside of the province of Quebec and the United States of America, whose aggregate numbers, as already stated, about 650,000, it may fairly and justly be claimed for them that they have carried with them from the mother province the best characteristics, habits and qualities of their race. They have made the most of their opportunities which nowhere or at any time have been either great or frequent.

If the hopes entertained by these pioneers and their well-wishers have not been realized wholly, it is due more to the vicissitudes, the handicaps and the difficulties which they have had to face and overcome. Certain it is that they have amply demonstrated that as colonizers they have few equals and certainly no superiors; they may at least take unto themselves the satisfaction that in our day and time colonizers still constitute the most useful, the most necessary and the most precious class of Canadian citizenship. They are fully conscious of the

fact that with their compatriots of the province of Quebec, they compose one-third of the population of Canada, and form an integral and essential part of the Canadian Confederation. Loyal to the British Crown, attached firmly to the Canadian soil, determined to discharge their obligations and duties to the Canadian Confederation, they wish to contribute, within the full measure of their opportunities, their intellectual and moral characteristics and ardent patriotism, to the progress and happiness of the Canadian nation.

Hewing down the forest and tilling the soil of these new regions may not bring great riches to them or their children; the state rather than themselves will benefit by their strenuous labor. Whilst others will be amassing fortunes in commerce and industry, the French Canadian colonizer realizes he will have to be satisfied with a

hard and laborious life and modest returns. He well knows and does not forget that the French pioneers and missionaries of North America were not gold-seekers, that his ancestors for as many as eight generations back have as a rule been content with the assurance of a good comfortable home, all his own, with a modest measure of ease, and a maximum of that which, after all, he thinks is the summit of earthly happiness; freedom, peace and contentment for himself and his large family.

He will continue to believe that there is something else in the world worth having and striving for besides a large fortune and that the mad rush after it, even when successful, has its penalties and drawbacks, and not infrequently is accompanied by sacrifices to conscience, the love of neighbor and of God. And who will say that his philosophy is not sound?

Emigration of Canadians to the United States

By G. E. JACKSON

Associate Professor of Political Economy, University of Toronto

THE westward movement of the people during the last thirty years is one of the most familiar themes in the domestic history of Canada. Possessing a population of almost exactly 250,000 in 1891, the four western provinces of Manitoba, Saskatchewan, Alberta and British Columbia numbered no less than 2,500,000 at the most recent Census, that of 1921.

It was shortly before the former date that the great enterprise associated with the names of Lords Mountstephen and Strathcona came to fruition: the first Canadian transcontinental dates from 1885. But its decisive vindication was delayed until the middle nineties, when a world-wide revival in the demand for farm products, following a generation of agricultural depression, opened wide the doors of opportunity no less to the western townsman who supplied his needs than to the prairie farmer by the railway.

READINESS TO MIGRATE

From that time till the present the tide of migration from the settled eastern provinces has never flagged. The number of Canadians of eastern birth and education who today live beyond the Manitoba boundary is, probably, not far from half a million. The steadily shrinking population of more than thirty rural ridings in Ontario bears witness eloquently to the strength of this attractive lure.

Not unnaturally, this evidence that the native-born Canadian is of a migratory habit, and shakes off easily the ties of home, has been viewed by many with complacency, and by some with pride. If the romance of

pioneering is sometimes hidden from the pioneer, it is seldom overlooked by the spectator. To those who witnessed this tremendous movement the railroad builder was an epic figure; and his vassals the children of the homestead settler were within the covenants. Nor was there any lack of singers to declare their praises; the vendor of western real estate was a self-appointed sagaman. In an age disposed to value fully the things of this world, the success of the migrant was measured by the growth of unearned increment. For a period of years before the war, that success was the history of Canada.

ACROSS THE BORDER

But concurrently with this expansion westward there was a movement of another kind, of equal or more than equal volume, which could not be regarded with the same unbounded satisfaction: the migration of Canadians to the United States.

To the politicians of the seventies and eighties, the tide of emigration from Canada had caused very grave concern. "The Americans may say with truth," wrote Goldwin Smith¹ in 1891, "that if they do not annex Canada, they are annexing the Canadians. They are annexing the very flower of the Canadian population, and in the way most costly to the country from which it is drawn, since the men whom that country has been at the expense of breeding leave it just as they arrive at manhood and begin to produce."

¹ *Canada and the Canadian Question*. By Goldwin Smith, D.C.L. P. 233.

There is good reason to believe that the migration of Canadians to the United States which prompted this gloomy reflection has never been arrested. Over a considerable period it was certainly diminished; but even in the first fourteen years of the present century, when immigrants from overseas were pouring into the Dominion by the hundred thousand, and the West was calling out for population, there was a continuous exodus of young and enterprising men and women, who were born, nurtured, and educated in Canada, only to leave the country when they reached maturity.

Not until lately has there been a general revival of interest in this phenomenon. Too often in the past the tendency has been to consider immigration as an isolated problem—to treat it, not as the substitution, in part, of one racial stock for another, but as a net addition to the total population. The readiness to do so was never, perhaps, more marked than in the first ten years of the present century. Happily, there is warrant for believing that at present a broader view prevails; for it is clear that to take up this narrow standpoint is to leave out of account a complex and important group of impulses—impulses which, by draining away much of the best blood of the nation, have effectively changed its character, and promise further changes in the future.

We have indeed the best of reasons for asking whether we can afford any longer to study the problem of immigration except in close connection with domestic difficulties of a practical character, which affect alike the native-born resident and the newcomer.

No serious attempt has been made by the Canadian Department of Immigration to record the number of emigrants leaving the country. It has been possible in recent years, by the

courtesy of the United States Immigration Department, to secure a record of the number departing across the American border, and to classify them according to birthplace; but whether such a record can pretend to great accuracy is at least open to question. The task of distinguishing the settler from the tourist is made infinitely more difficult at border points than at the seaports, both by the freedom of movement between the two countries, and by the fact that they possess the same language. In any case, an enquiry which attempts to cover an extended period must be based on information from some other source.

The source most immediately available is the Census of the United States. Though it tells us nothing of the Canadians moving into the United States in any period, it presents in great detail the number of Canadians living in the United States at the time of each enumeration, distinguishing them by place of residence, and in later years also by language, as French and Other Canadians.

The results are summarized in Table I.

It will be seen that during a period of sixty years there was a continuous increase in the number of Canadians living in the United States. The period in which this increase was most rapid was the decade from 1880-1890. The number of French Canadians was at the maximum in 1900, and since then has fallen off considerably. The number of English-speaking Canadians did not reach its maximum till 1910, and had fallen off by scarcely more than 1 per cent in 1920.

Of the total number of native-born Canadians living on this continent, it is probable that the proportion permanently domiciled in the United States was approximately as follows:

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TABLE I

NUMBER OF CANADIAN-BORN RESIDENTS OF THE UNITED STATES, 1850-1920

	FRENCH CANADIANS	OTHER CANADIANS	TOTAL
1850.....	.....	.....	147,711
1860.....	.....	.....	249,970
1870.....	.....	.....	493,464
1880.....	.....	.....	717,157
1890.....	302,496	678,442	980,938
1900.....	395,126	784,796	1,179,922
1910.....	385,083	819,554	1,204,637
1920.....	307,786	810,092	1,117,878

In 1880, 165 per 1,000

In 1890, 192 per 1,000

In 1900, 203 per 1,000

In 1910, 179 per 1,000

It is unfortunately not yet possible to calculate the probable ratio for 1920.

ATTEMPTS AT CALCULATION

Using these figures as a basis, the late Dr. Morley Wickett² made an attempt to measure the volume of emigration during the second half of the nineteenth century. His method was interesting, and, so far as I know, original. He took the absolute increase in the number of Canadians living in the United States in each intercensal period, assumed an average age for the group of twenty-five years at the time of enumeration, and calculated by means of a standard mortality table the probable number of survivors in 1900. The proportion between the net increase from 1850-1900 in the number of Canadians resident in the United States, and the probable number of survivors from the increase of each decade gave him a multiple which he did not hesitate to apply to the total increase

²Canadians in the United States. By S. Morley Wickett, Ph.D. *Political Science Quarterly*, Vol. XXI, 1906. Subsequently reprinted in the *Annals of the American Academy*.

from 1850-1900 in the number of persons of Canadian birth. Probably of set purpose, Dr. Wickett made his calculation loosely: the conclusion which emerges from his study is that the net emigration of native-born Canadians to the United States during the whole of the fifty years was rather more than 1,500,000.

The method employed is open to criticism from more than one standpoint; but it will serve. A later calculation based on other methods reaches much the same results. If it be supposed that the crude annual death-rate among Canadians in the United States during the whole period was about 17 per 1,000, it may be shown that the probable emigration during the second half of the nineteenth century was almost exactly 1,550,000.

An advantage of the latter method is that it makes possible an estimate of the movement in each inter-censal period, and a comparison of movements in different periods with one another.³ The volume of emigration in each inter-censal period calculated

³Limitations of space do not permit a discussion of the reasons which have led to the selection of a death-rate of 17 per 1,000. Lest it be urged, however, that the death-rate is arbitrarily chosen and likely to be wrong, the following considerations are submitted: (a) That a given error in the selection of the death-rate causes an error slightly less than half as large

to the nearest 5,000 in each case, is as follows:

TABLE II

CALCULATED NET EMIGRATION OF CANADIAN-BORN CITIZENS TO THE UNITED STATES, 1850-1920

1850-1860.....	135,000
1860-1870.....	305,000
1870-1880.....	325,000
1880-1890.....	410,000
1890-1900.....	380,000
1900-1910.....	225,000
1910-1920.....	110,000
Total.....	1,890,000

Considered in themselves, the figures for the decades 1880-1890 and 1890-1900 are a striking confirmation of the statement already quoted from Dr. Goldwin Smith. But the seriousness of the situation which confronted Canada during these trying years may be shown even more vividly by the presentation of the facts in terms of natural increase.

EMIGRATION IN TERMS OF NATURAL INCREASE

A comparison of the calculated volume of emigration in each of these decades with the natural increase of the Canadian-born population living in North America during the same time establishes a strong probability that in each of them at least half of the natural increase, and perhaps rather more than half, was lost to Canada through emigration. The calculated natural increase during the

in the calculated volume of migration, *i.e.*, that if the selected death-rate be 20 per cent too high, the calculated volume of migration will be slightly less than 10 per cent too high; (b) that an alteration of the death-rate selected will not affect materially the *relative proportions* of emigration in different inter-censal periods, to the total.

years from 1880-1890 is 775,000 (as compared with an emigration from Canada numbering, as above, 410,000), and the corresponding figures for the decade from 1890-1900 are 685,000 and 380,000.

Even in the years from 1900-1910, it is probable that more than 20 per cent of the natural increase of the native-born population was lost in the same manner.

Canadians have solid ground for satisfaction in the steady diminution of the stream during the twentieth century: but since the beginning of the present depression in agriculture (more especially since the beginning of industrial revival in United States), a melancholy series of reports from many parts of Canada bears witness to the fact that the tide is once more flowing freely.

"So far as the western provinces are concerned," said a member of the House of Commons⁴ at the beginning of the present session, "we find the largest crop in our history, and yet we find agriculture in a deplorable financial and economic condition. . . . An examination of the railway figures indicating the emigration through the port of Kingsgate, which is one only of the avenues of exit from the province of Alberta to the States, shows that in the three months ending December 31st last, there has been an excess of emigration over immigration of approximately 5,000 paying passengers."

Not all of these, however, were Canadians.

POLITICAL ASPECTS

Canada is interested for political as well as for obvious social and economic reasons in a question which demands more detailed analysis. Her future must to some extent be determined by the racial composition of this stream of emigration; and her

⁴ Mr. Shaw, House of Commons Debates, February 5, 1923.

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immediate, if not her most important interest in this phase of the question is electoral. Quebec has a fixed membership of sixty-five in the House of Commons. Under the British North America Act, the numerical strength of the members representing other provinces depends on the changing proportion between the population of this province, and that of the Dominion as a whole. About four-fifths of all the French Canadians in Canada live in Quebec; and they constitute in themselves about the same proportion of its total population. It is probable, therefore, that any decisive change in the numerical relationship between French and English-speaking Canadians will react on the political balance of power.

COMPARISONS

Which of the two peoples composing the native population of the Dominion has been the more ready to migrate? Until 1890, when the distinction already mentioned between French and Other Canadians was introduced into the Census of the United States, the question remained unanswered. During the last thirty years it appears that the situation has been as follows:

TABLE III
CALCULATED NET EMIGRATION FROM CANADA
TO THE UNITED STATES, 1890-1920

	FRENCH CANADIANS	OTHER CANADIANS
1890-1900.....	150,000	230,000
1900-1910.....	55,000	170,000
1910-1920.....	20,000*	130,000

* Immigration. There is reason to believe that the number of French Canadians returning from the United States to Canada during the years 1910-1920 was in excess of the number migrating from Canada to the United States. Whether the backward movement is composed mainly

It will be seen that in each of these three decades Other Canadians form the bulk of the movement; indeed, in the most recent inter-censal period they seem to constitute the whole of it. But it is not by counting heads that we shall find an answer to the question immediately before us. The French Canadians represent less than 40 per cent of the total native-born population of Canada; that they should supply less than half the total emigration of the native-born is very natural, and not in itself significant. To reach a positive conclusion, we must resort again to the comparison between the natural increase of the people,⁵ and their emigration.

It is not possible at present to carry this comparison beyond the year 1910. Fortunately, however, in the years following 1910 no precise comparison is needed. For the two preceding decades the calculated ratios are widely divergent, as is shown in Table IV.

FRENCH CANADIANS LESS MIGRATORY

Making every allowance for possible errors in the choice of an assumed death-rate (and these must in turn be reflected in the figures, if on a scale much smaller) it appears that, great as the migration has been, both of French and Other Canadians, the French have for at least a generation past been the less inclined to move across the border; and that, for a time at least, the "leakage" of French Canadians to the United States ceased altogether. It is something of a paradox that the community whose

of young French Canadians returning to find employment in Canada, or of older men and women returning to spend their declining years among their own people, it is at present impossible to say.

⁵ As before, the natural increase is calculated in respect of all the native-born Canadians living on the North American continent, whether in the United States or Canada.

TABLE IV

EMIGRATION OF NATIVE-BORN CANADIANS TO THE UNITED STATES: PERCENTAGE OF TOTAL NATURAL INCREASE

	PROBABLE NATURAL INCREASE	CALCULATED EMIGRATION	PERCENTAGE
A. 1890-1900			
French.....	330,000	150,000	46%
Other.....	355,000	230,000	65%
B. 1900-1910			
French.....	365,000	55,000	15%
Other.....	555,000	170,000	31%

birth-rate is relatively high seems at present to retain its children; while other communities on either side of it, whose cradles are by no means always full, must still apparently pay human tribute to the modern Minos, and annually lose a quota.

The political importance of Quebec is in any case endangered by the coming of each new batch of immigrants; for most of them are destined to find work in English-speaking provinces. Inasmuch, however, as the French Canadians have been for many years less migratory than their neighbors, their greater reluctance to leave Canada has obviously been acting as a counterpoise. It is not to be wondered if their historians dwell with pardonable pride on this attachment, as evidence of enduring vitality in a civilization older than the *Mayflower*. As an element in the present strength of Lower Canada we must not ignore it.

CAUSES OF CHANGE IN TYPE

It is possible that a strict enquiry into the forces which have brought about the recent rapid diminution in the number of French Canadians living in the United States might yield results which would assist the governments of provinces other than

Quebec in the working out of policy. Let it be frankly confessed, however, that this is unlikely; and for two reasons:

(1.) The French Canadians, in the United States as well as in Canada, form a compact minority. They are homogeneous alike in religion and in language. Their religion serves as a powerful bond of union between them; their language, to some extent at least, as a barrier restricting intercourse with other peoples. By contrast, the lot of English-speaking Canadians resident in the United States is very different. Heterogeneous in religion, and hampered by no barriers of language, they are so prone to rapid assimilation with the Americans among whom they settle, that a carefully planned scheme of repatriation, even if it should achieve a moderate success among the former, might well fail altogether when applied to the latter group.

(2.) Apart from this consideration, there are good grounds for believing that while some of the reasons for the changing composition of the Canadian emigrant population are to be sought in Canada, another (perhaps no less important) may be found in the westward and southward expansion of American industry.

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In the period from 1890-1920, while the population of the northern and southern states grew by 60 per cent, that of the western states⁶ increased by nearly 200 per cent. The change in the distribution of economic opportunity, of which this development is both a consequence and an illustration, must inevitably have lessened the stimulus to migration in certain parts of Canada, while increasing it in others; for distant drums beat faintly.

GEOGRAPHIC INFLUENCE

The geographical distribution of the French and English-speaking Canadians in the United States has always been for obvious reasons quite dissimilar. Emigrants from each Canadian province tend naturally to make their first settlement in the state or states immediately to the south of them. The towns and cities of New England have a stronger attraction for men of the Maritime Provinces or Quebec than for those whose birth-place lies west of the river Ottawa. Thus in 1920 there were more than 10,000 French Canadians both in

Fall River and in Lowell. The number in New Bedford was slightly less than 10,000. Next in order of the large industrial cities were Worcester, with 4,300, and Springfield, with 3,700. It is more than a coincidence that all of them lie within the state of Massachusetts; and there is every reason to believe that most of the 40,000 Other Canadians enumerated in Boston hailed originally from New Brunswick, Prince Edward Island or Nova Scotia. In the same way do Detroit and Buffalo make a natural appeal to the native of Ontario; in the former of these there were more than 55,000 English-speaking Canadians at the time of the last Census. Seattle and Los Angeles have a direct attraction for the migrant from British Columbia, where sea communication is direct and easy; the number of Other Canadians in each of them exceeded 13,000 in 1920.

The facts with regard to distribution are summarized in Tables V, VI, and VII. For the convenience of the reader, the maximum figures for each of the main geographic divisions are printed in *italics*. It will be noted that in point of time they differ quite considerably.

A further consolidation of the figures shows vividly how the recent develop-

⁶That is, of Montana, Washington, Oregon, Idaho, Wyoming, Colorado, Utah, Nevada, California, New Mexico and Arizona.

TABLE V

GEOGRAPHICAL DISTRIBUTION OF FRENCH CANADIANS IN THE UNITED STATES, 1890-1920

GEOGRAPHIC DIVISIONS	1890	1900	1910	1920
New England.....	205,761	275,435	278,156	240,385
Middle Atlantic.....	23,593	29,785	27,012	17,045
East North Central.....	46,789	55,554	46,614	29,267
West North Central.....	18,924	21,465	17,920	10,459
South Atlantic.....	284	636	763	813
East South Central.....	124	419	331	179
West South Central.....	270	1,041	1,045	590
Mountain.....	3,361	5,603	5,276	3,482
Pacific.....	3,390	5,183	7,966	5,566
United States.....	302,496	395,126	385,083	307,786

TABLE VI

GEOGRAPHICAL DISTRIBUTION OF OTHER CANADIANS IN THE UNITED STATES, 1890-1920

GEOGRAPHIC DIVISIONS	1890	1900	1910	1920
New England.....	174,406	235,755	248,083	233,971
Middle Atlantic.....	86,460	109,642	121,357	120,049
East North Central.....	228,784	242,091	226,526	222,213
West North Central.....	107,163	103,213	84,929	69,788
South Atlantic.....	5,128	6,284	7,918	12,059
East South Central.....	3,034	2,960	3,178	2,967
West South Central.....	4,725	5,842	7,625	8,106
Mountain.....	22,223	26,582	31,336	30,188
Pacific.....	46,510	52,427	88,602	110,758
United States.....	678,442	784,796	819,514	810,092

TABLE VII

GEOGRAPHICAL DISTRIBUTION OF ALL CANADIANS IN THE UNITED STATES, 1890-1920

GEOGRAPHIC DIVISIONS	1890	1900	1910	1920
New England.....	380,167	511,190	526,239	474,356
Middle Atlantic.....	110,062	139,427	148,369	137,094
East North Central.....	275,573	297,645	273,140	251,480
West North Central.....	126,087	124,678	102,849	80,244
South Atlantic.....	5,412	6,920	8,681	12,372
East South Central.....	3,158	3,379	3,509	3,146
West South Central.....	4,995	6,883	8,670	8,696
Mountain.....	25,584	32,190	36,612	33,687
Pacific.....	49,900	57,610	96,568	116,324
United States.....	980,938	1,179,922	1,204,637	1,117,878

ment of the western states has influenced the situation. In Table VIII the two groups of Canadian emigrants are classified in two categories only, those who were living in the northern and southern states at the time of each Census being placed in the former, those who were living in the western states constituting the latter.

It will be noticed that there was an all-round increase of numbers in the decade from 1890-1900. On the other hand, so far as the northern and southern group is concerned, it is evident that during the whole of the period from 1900-1920 the number of Other

Canadians, as well as of French Canadians has been diminishing.

The decline has been as follows:

	1900-1910	1910-1920
French.....	-3%	-20%
Other.....	-1%	-4%

In 1920 there were some 36,500 fewer English-speaking Canadians in this category than had been enumerated in 1900. Only the remarkable attraction of the western states for English-speaking emigrants from Canada suf-

TABLE VIII

GEOGRAPHICAL DISTRIBUTION OF CANADIANS RESIDENT IN THE UNITED STATES

	NORTHERN AND SOUTHERN STATES	WESTERN STATES	TOTAL
1890			
French.....	295,745	6,751	302,496
Other.....	611,709	66,733	678,442
1900			
French.....	384,355	10,791	395,126
Other.....	705,787	79,009	784,796
1910			
French.....	371,841	13,242	385,083
Other.....	699,576	119,938	819,514
1920			
French.....	298,738	9,048	307,786
Other.....	669,149	140,943	810,092

ficed to swell the total during the first ten years of the twentieth century; and even this was insufficient altogether to neutralize the shrinkage which occurred elsewhere in the second decade.

Nevertheless, if the west be left out of consideration, and attention be confined to the larger group of states, it is clear that the ostensible similarity between French and Other Canadians, involved in this contemporary shrinkage in their numbers, masks a difference that is very real. The fact that the French diminished from four to five times as rapidly as the others reinforces the conclusion which has already been drawn that—for whatever reason—they feel the ties of home more strongly than their Anglo-Saxon neighbors.

NATIONAL RESTLESSNESS

Demonstrably more migratory than either the British or Americans, the people of Canada have not yet completely lost the restlessness that marks a race of pioneers. Until within the present generation, the mental attitude of the frontiersman was plainly

visible and often dominant in politics: it may be long in disappearing. If some of its manifestations have not been altogether lovely, there are many, nevertheless, who will watch its passing with regret.

When harnessed in the service of the country, that restlessness may prove a source of power. Though he did not always understand the folk with whom he lived, the late Louis Hémon has seized in a vivid phrase and well described "the passion of a man whose soul was in the clearing, not the tilling of the land." Such a passion sends one man to the wilderness for gold; another to the west in search of oil; a third into the maelstrom of imperial politics in London. These have a consciousness of purpose; not one of them is lost to Canada. But there are many whose tendency to roam is not thus disciplined and governed; men to whom the common round is irksome, the distant prospect bright. The consciousness of nationality has not yet bound them. The prizes which await even a moderate success in the United States have an appeal that will not be denied; they make their homes across

the border. Once established there, they soon find reasons for remaining.

. . . "Evadere
"Hoc opus, hic labor est."

The decline in the volume of emigration to the United States during the twentieth century suggests that in recent years this restlessness of temper has tended increasingly to find expression in Canada. But the swiftness of the decline is due by no means wholly to the growth of opportunities in the Dominion.

EFFECT OF THE WAR

Involving, as it did, the enlistment of 590,000 men in the Canadian Expeditionary Force (of whom it is only reasonable to suppose, in default of precise information, that at least 50 per cent, and probably more were born within the country) the war affected the stream of emigration in two ways. In the first place, many must have been absorbed in military service who would otherwise have gone in search of fortune to the United States. In the second place, not a few Canadians who had made their homes abroad came back in order to take their places in the ranks. But for the war, it is reasonably certain that there would have been a larger net emigration in the second decade than in fact occurred. It is useless to speculate whether this would have been as great as, or smaller than, that of the period from 1901-1910.

It is to be hoped that the future expansion of Canada will provide attractive opportunities for an increasing proportion of the native population. Nevertheless, we shall do well to recognize that there will be recurring intervals in which the tide of emigration is likely to flow, sometimes with considerable freedom.

(1) The comparatively wide ex-

tremes of climate which are to be found in most parts of the Dominion make the problem of seasonal unemployment a matter of greater concern than in countries with a smaller range of variation. In the building industries, for example, there is a slack season which, if it has been shortened considerably within recent years by technical improvements in construction, is unlikely to disappear, at least for many years to come. In so far as building activities are resumed each spring in many parts of the United States a little earlier than in Canada, the temptation to cross the border will always beset the Canadian worker who has already suffered from a spell of winter unemployment in his own country.

(2) In the periodic depressions which mark the trade cycle, it is a matter of observation that industrial revival in the United States precedes, as a rule by some months, industrial revival in Canada. Here again is an influence which tends to foster emigration, and which (unfortunately) applies not only to the group of industries which is subject to marked seasonal fluctuation, but to the whole range of economic activity.

With these considerations in mind we may contemplate without undue concern the probability that a certain "leakage" of native blood will occur in the future, as it has done in the past. So long as it is small, it need occasion no surprise. If, on the other hand, it should ever again assume the dimensions which distinguished the period from 1870-1900, there would be little consolation for those who remained at home, in the thought that much of the best work done in the United States is to the credit of Canadians. In proportion to their capacity for service, they can ill be spared by their own country.

The Immigrant Settler

By P. H. BRYCE, M.A., M.D., Ottawa
Formerly Chief Medical Officer of Immigration

IT would be of much interest and would as well supply an adequate background for our present study if we could relate the story of the many bands of emigrants, who leaving foreign lands, whether in Europe or America have, during the past 300 years, found their way to Canadian shores and played their part in making up the macrocosm of what we may fairly designate the Canadian Nation. Our task must, however, for the present, be a less ambitious one of trying to present something like a composite picture, made up of the salient features reflected from the lives of the emigrants, who since 1880

have landed in Canada, even though they may not have remained permanently as settlers.

Nevertheless it will be useful to recall the several more or less distinct periods which have marked Canadian immigration since the beginning in 1600. They are the following, with populations supplied so far as any estimates can be made from census figures taken in different provinces in the early years at dates comparatively approximating each other:

IMMIGRATION PERIODS

(1) Each of these more or less distinct periods might well form the

Year	Pop.	
1600-1683	9,677	Permanent French settlement, begun under Colbert's immigration scheme with formation of Seigneuries with Feudal laws.
1700-1784	160,000	British and American traders and settlers, with loyalist refugees from the United States.
1784-1815	350,000	Period of U. E. Loyalist immigration, and of many immigrants from the United States and Great Britain.
1815-1825	790,000	Period of British soldier settlements with many Scotch, Irish and English immigrants; also a considerable number from the United States.
1825-1841	1,750,000	Period of continued British immigration especially of the artisan, agricultural and labor classes and considerable immigration from the United States.
1841-1860	3,200,000	Period of greatest immigration to Canada from Great Britain of agricultural and artisan radical classes continued both from Great Britain and Ireland.
1860-1880	4,328,810	Period of slowing down of British immigration, owing to the absence of good free grant lands in Ontario and Quebec and a lack of railway communication to the Northwest.
1880-1900	5,371,315	Period of diminution of immigration to Canada from Great Britain and the continent of Europe, owing to the great free grant lands opened up in the northwestern states.
1900-1914	8,000,000	Period of the greatest immigration to Canada from Great Britain, the United States and the continent of Europe.
1914-1922	9,000,000.	Period of almost complete cessation of immigration on account of the Great War and its after effects.

basis for a separate study; but it will suffice to indicate a few of the influences belonging to each, which affected Canadian development. The fur-trading period was the outcome of the ferment which caused the sixteenth century to be called that of religious wars, beginning shortly after the Spanish discovery of America, and when the race for wealth began in the New World, stimulated by the love of adventure and discovery, and by the desire of the different European nations to plant both their flag and their religion amongst the savage peoples of the new lands of the West. That this was true in Canada we learn from Champlain himself and from the serious missionary efforts made in the first half of the century to extend the propaganda of the Jesuits to the Indian tribes of Canada. During this period scarcely a seigneury or other settlement was established in Canada, and it was not until the second period that permanent settlement was really begun. This was due to Colbert, the astute minister of Louis XIV of France, who seeing England establishing new colonies along the Atlantic coast to the south and in the East Indies under a trading company, while the Dutch had already a similar trading company in India and a growing settlement on the Hudson River, was determined to make France equally active both in commerce and political power in these newly discovered lands.

(2) That Colbert's plan was successful during some twenty years of great activity was evidenced by the well-established settlements along the St. Lawrence, only stopped during the Indian wars under Frontenac and the continuation of the European wars between France and England. But Canada had become now a real colony with its settled agriculture,

with its seigneuries and feudal laws and customs established, and a steady growth in spite of the almost constant European wars found a homogeneous people to the number of 60,000 in 1760 when Canada passed into the hands of the English.

(3) The third period of immigration was in many ways as unique as the first. For a century and a half the almost continuous European wars had transmitted their influence to the colonies in America, and during this period it might be said that there was almost no time when the colonies along the British and French borders were not engaged in more or less active hostilities against each other. Then came the period after the American Revolution when King George's men were driven from the thirteen states of the Union, and it seemed the irony of fate that these oldest protagonists of the French should have found it necessary to become exiles from their homeland and to found new settlements in the country of their erstwhile foes. But in Canada there was room for all, and the very needs of the refugee Loyalists found many a response in the hearts of the kindly French habitants, who after all had found they were happy and secure, retaining their old language, laws and religion under the same flag, for which these refugees had fought. Fortunately it was made possible for the two peoples to expand side by side, each developing its own ideals without let or hindrance by the formation of the two provinces of Upper and Lower Canada in 1791.

A COMMON NATIONALITY

(4) Thus has continued for over a century the development of the two provinces side by side, giving an illustration almost better than any other in the world of how freedom and liberty

under a paternal government, on the whole one desiring to rule justly, can result in building up a common nationality out of diverse elements. The common national feeling was cemented by the War of 1812, after which the real struggle for the conquest of the Canadian wilderness and turning it into smiling fields began both in Upper and Lower Canada. The Loyalists and half-pay British officers brought with them some capital, a strong desire for education and something of the culture and superior qualities, associated with birth and greater opportunity, which in this case were fortunately supplemented by the energy and practical industry, which have always marked the agricultural and artisan classes of Great Britain. Evils both political and social doubtless grew up with the privileges granted to these early settlers, growing for a time into an oligarchy, which in some degree impeded the development of the two provinces as well as the settlements in the Maritime Provinces; but this largely ended with the union of Upper and Lower Canada and the establishment of responsible government in 1848. It is quite possible that this period of internal conflict was not without its uses in educating a people, unaccustomed in many ways to the business of politics, to develop individuality of thought and action in a new land, since after the Union the evolution of government in Canada, both national and municipal, developed much more rapidly even than in the British Islands.

RAPID DEVELOPMENT

(5) The next twenty years of Canadian immigration and settlement proved the most strenuous politically, which probably Canada has seen. The development was extremely rapid and the immigration more than doubled be-

tween the years 1841 and 1861. These immigrants were almost wholly of British origin, and brought with them the positive opinions, which had developed during the previous forty years of radical discussions, which primarily followed the ferment created by the French Revolution. Municipal government was established on a firm basis in both provinces, anachronisms such as the Clergy Reserves in Upper Canada and the Seigneurial System in Lower Canada were swept away, and a broad and generous franchise supplied the people with an opportunity for developing self-government in its highest sense.

By 1861 the good lands of the two old provinces were well filled with new settlers. Railroads had already been built from the ocean to the American border to the west and beyond it, and as yet the western Canadian provinces had not been added to the Dominion. Some new ideas were essential if Canada was to fulfil her destiny. Confederation was established in 1867 and the old provinces of Canada had added to them those down by the sea, and in 1870 the great Northwest, and British Columbia in 1873 completed the outlines of a country, which was to develop a half a continent during the next fifty years. The long continued struggle for individual freedom, which had gone on for more than twenty years in the United States ending in a civil war, had doubtless served to stimulate still further the principles of freedom and human rights in Canada; while with the filling up of the western prairies, which began in 1871, all that was now necessary was industry, honesty in public life and correct economic principles in order to insure true greatness to the Canadian Dominion, which was now well started on her career of development.

DEPRESSION FOLLOWING EXPANSION

(6) The year 1880 stands out in the political history of Canada in bold outline. From 1866 to 1873 a period of continuous expansion to some extent artificial, had gone on keeping pace in some degree with the tremendous development of the western United States following the Civil War. The railway had reached the Pacific; immigrants, nearly half a million yearly, were pouring in; expansion became enormous and begot almost unlimited land speculation. Of course a crisis arrived when in September, 1873, banks closed their doors, railway securities proved to have only a nominal value, and for the succeeding five years financial clouds hung dark over the United States and incidentally over Canada, whose commercial revival had followed that of the United States, only to recede again with the depression in that country.

That Canada had been hard hit during this time may be judged from the fact as seen in the table of immigration in the Appendix, which shows that in 1881, 132,653 immigrants left Canada while only 47,991 came in. The agricultural depression which paralleled that in the United States during the seventies became the occasion for a political propaganda in which the idea was put forth of a national policy, which was to protect the interests of the 5,000,000 odd people of Canada against the enormous population engaged in the same industries to the south. It was successful, and after the elections of 1878 what is known as the National Policy was adopted to encourage manufactures through the imposition of a tariff of some 33 per cent.

Remarkable effects, which may be fairly ascribed to this legislation, may be seen in the table of exports found in the Appendix; but it may be stated

that while in the year 1873 the total trade per capita was \$57.57, it fell in 1881 to \$43 and was as low as \$41 in 1895. It is true that immigration of Canadians to Manitoba had been going on gradually from 1871 to 1880 when the Canadian Pacific Railway was completed, after which the public were assured immigration would begin to rush in as rapidly as it had been doing for so many years into the western states. But a government was in power elected to bolster up the privileges of a protected few. They granted subsidies to the railway in large amounts, yet failed to supplement this progressive step by land laws, which would be likely to encourage immigration. For several years at the initiation of the railway building dozens of land companies were given charters, so long as it was understood that they would support the policy of the Government, without any adequate guarantee that their promises to bring in immigrants would be made good. In this way many millions of acres of public lands were alienated for mere speculation, while proper land settlement was made difficult by the fact that alternate sections of land along the railway had been allotted to the railway authorities and continuous settlement there on homesteads was not possible.

EFFECTS POLITICAL AND SOCIAL

Such is a brief summary of a century of immigration, during which with a certain sprinkling of German immigrants, whether from Germany direct or indirectly from the United States, Canada had been peopled almost wholly by immigrants from Great Britain. They brought with them their social customs, their religious and their political affiliations, the latter being sedulously cultivated by the two political parties in Canada. These

were in large measure retained by the immigrants in their new home; the voluntary Scotch churchmen and less often the dissenting English churchmen found themselves in the ranks of the Reformers, while the Scotch and English Established churchmen remained Conservatives. The Ulster Irishman remained true to his Orange Lodge and Conservatism in politics under almost all circumstances, while the south countrymen tended rather to the opposite party. But with the growth of urban populations, which began especially after 1880, while the rural population declined, the curious phenomenon was observed of English radicals, members of Labor Unions in a free trade country, passing very generally into the ranks of the Protectionists in Canadian cities, where they were led to believe that their welfare was directly associated with the high tariff policy.

Such in general outline was the political and social situation when the so-called Liberal Government came into power in 1896. Almost twenty years had passed, the ratio of increase in population during the preceding two decades had declined below that of a normal increase of births over deaths, since while it was 17.23 per cent between 1871 and 1881 it fell in 1881-91 to 11.7 per cent and in 1891-1901 to 11.1 per cent. Reasons already given such as lack of fertile free-grant lands in Ontario before the Canadian Pacific Railway was built, the tremendous drift of population both Eastern American, Canadian and European toward the prairies of the northwestern states from 1880 to 1900, and the low prices of all farm products owing to the enormous production in these new states all helped to explain this decline in Canada's population. But the extremely bad land policy of the Canadian Govern-

ment, high freight rates from the new districts in the Northwest, added to the uncertainties of a cold northern climate, served together to discourage those settlers, who had gone in to the extent that British immigration had almost ceased by 1900. Indeed the total population of the three Northwest Territories had grown from 25,778 in 1881 to only 319,000 in 1900.

EXPANSION OF CANADIAN NORTHWEST

(7) But it was impossible that a magnificent extent of country, with its splendid possibilities such as the Canadian Northwest, should continue to remain undeveloped where occupied by free-born Canadians. Manitoba's school question had brought that province in 1891 into political prominence; the pioneers of the West, accustomed to meet and overcome difficulties, were as positive in asserting their rights to educational self-government as they were in opposing oppressive freight rates and bad land laws. So it happened that after the change of government in 1896, a leader in these western political agitations came to be appointed Minister of the Interior in the new Laurier Liberal Government, which had succeeded in its struggle for provincial educational autonomy in Manitoba. Long a settler in the West, he knew the needs of the country at first hand, appreciated the real difficulties of the western problems and was determined to overcome them. He formulated and gained the approval of the Government, of the Steamship and Railway Transportation Companies for a new immigration policy. Commissioners of immigration were appointed both in the United States and in Great Britain and the continent, who directed a government propaganda in the several countries and coöperated with all approved immigration agencies, en-

gaged in obtaining immigrants for Canada.

What the results were may be seen in the Appendix to this article. The first most notable results were obtained in the northwestern states. Great colonization companies there had been engaged in filling up these districts during the previous twenty years and, their work largely ended, they were now encouraged to carry on their operations in bringing American settlers to Canada. Amongst other activities perhaps the greatest was that of the Saskatchewan Land Company, which proved remarkably successful in filling up the cheap land of its two million acres largely with American settlers. Early operations on the continent of Europe were begun in 1898 and from this time a stream of Ruthenian agriculturists from the Austrian provinces of Galicia and Bukovina, on the wooded slopes of the Carpathians, began to pour into Canada and ceased only with the war in 1914. These Slavic immigrants were supplemented by others both from Poland and southern Russia, while Finland and Scandinavia even sent their smaller quotas. It was a fortunate occurrence that Canadian soldiers met English Tommies in South Africa during the war there and told of the great undeveloped Canadian West; while after the war these returned soldiers were to again hear in Britain from agents in every town and village of the great Canadian prairie lands still awaiting settlement.

OUTCOME OF IMMIGRATION POLICY

(8) The outcome of this well-directed immigration policy is to be found in the immigration returns of the next fourteen years, which show that between 1900 and 1913 inclusive Canada received the following immigrants:

United Kingdom.....	973,730
United States.....	871,120
Continent of Europe.....	656,280

or a total immigration in thirteen years of 2,521,144, or almost 50 per cent added to the population of 1901. That a large proportion of this immigration proceeded to the Northwest is seen in the fact that the population of the Prairie Provinces, which was 419,542 in 1901 was 1,278,708 in 1916; while from 1897 to 1920 there were 528,006 homestead entries there, and the wheat production of Saskatchewan had increased even in 1910 from 5 per cent to 55 per cent of the total produced in Canada. During the period of 1901 to the war in 1914 railway development in the West had gone on in keeping with the tremendous immigration to that territory. The total railway mileage in Canada of 18,000 in 1901 increased by 1917 to 36,604. Both from a political, economic and social standpoint this tremendous development of railway building had most important results, as had been seen during the previous forty years in the United States. With every great railway expansion there had gone on an equally great speculation in land values, owing to the system of establishing boom towns during such railway building. Exactly the same state of affairs followed railway construction in Canada. It is difficult today in view of all the facts to speak with indifference of the orgy in land speculation, which went on from 1901 to 1914 in Canada. It was promoted by politicians from senators to the ordinary members of Parliament, and the savings of widows and housemaids were indiscriminately drawn upon by the seductive influences of the universal land agent. Even college professors and church divines indulged in the Get-Rich-

Quick dissipation, and no government, federal, provincial or municipal, made any serious effort to regulate or prevent the debauch, which had its inevitable result in the final crash of the land boom in 1913, even though 400,000 immigrants had landed in that year.

EFFECTS OF IMMIGRATION

(9) It is perhaps idle to moralize on the effects of such a continued period of land speculation as went on during the fourteen years; but it is certain that nothing that could have occurred in Canada could have more seriously affected the general moral tone and social development of the whole people than this has done. It was inevitable that the population of Canada composed in 1900 mostly of people belonging to the two old stocks of British and French, which had been present at the beginning of the nineteenth century, should be seriously influenced by such a wave of immigration in all that relates to its material and political development. It has meant that in almost a single decade Canada had to absorb and assimilate a population almost equal to 50 per cent of that in 1901. With regard to the rather larger number of those from Great Britain than from other countries it may be said that this enormous number of persons, largely from urban centers, has given a definite tone to the social life and to some degree the thought of our Canadian cities, which have increased by over 100 per cent during this period. They have brought certain positive social and cultural qualities to the advantage of our Canadian life. Thus they had grown up in an old country having a tradition of law and government the same as our own, and had for generations cultivated a respect for law and social conventions probably greater

than even Canadians had. They spoke the same language, and the educated class perhaps on the whole spoke it better. They brought with them a certain traditional culture, which has promoted in Canadians a better appreciation of art, music and literature; but along with these valuable qualities they increased what had already been growing up too rapidly amongst ourselves, the tendency of the people to crowd into the cities, which has resulted in the enormous urban increase already indicated.

INCREASE IN URBAN POPULATION

During the boom years the urban populations in the many growing cities kept spreading outward, and an artificial prosperity followed when one year's immigrants were kept busy building houses for the newcomers of the next. Prices of articles of consumption of every sort increased by at least 50 per cent; house rentals were enormously advanced only to find when the crisis came, hundreds of thousands of persons in cities without anything to do. Hundreds even in the summer of 1914 were going to the City Halls for municipal charity, while the thousands who had been speculating in land margins were now forced to realize on their holdings and could find no one with money to buy them. It has meant, in a word, that millions of money have been buried in thousands of acres of town lots, never to be resurrected, and with them the land gambler's last hope and too often therewith his moral sense.

This enormous increase of urban population was distinctly a disappointment to those who were endeavoring to develop the great agricultural and other natural resources of Canada, since such urban immigrants are in a sense only middlemen and as such are not in fact creators of wealth out

of the natural resources. Further than this, increasing urban populations make life more artificial and complex; while its effect upon the cost of living was most serious. Speaking generally, the cost of the chief items of living increased at least 50 per cent during this period of great immigration. The British artisan formed a large proportion of this urban immigration and in many respects has proved one of the most valuable immigrants to any country; but there is little doubt that the extreme development of trades unionism amongst them has added a difficult factor to the problems of house building and city work generally through their insistence on an eight-hour day in industry. In provinces where the urban population is large, this is again reflected upon rural labor, which in some districts has made agricultural development come almost to a standstill, since with an increased cost of production there has been no similar increase in the cost of wheat, cattle and similar products.

THE AMERICAN IMMIGRANT

(10) Turning to the American immigrant of whom nearly one million came to Canada during the period it can only be said that from a material standpoint they have proved one of the greatest assets to Canada. It is a compliment to Canadians that these immigrants were composed largely of the children and neighbors of those who had left the Canadian homeland and gone to the United States. There they had learned the art of prairie farming, were industrious and moral, and when they came to Canada, they brought with them capital, energy and a trained intelligence, quickened in the environment of western prairie life. Not only have these settlers proved splendid pioneers but they also have been optimists and propagandists of the

virtues of their new-found country. It is true that in the early boom days some of them were amongst the most active in land speculation, but then who were not? The land grabber had his day and has largely disappeared; while the large proportion of agriculturists amongst the settlers have proved a distinct acquisition to Canada. They have learned Canadian political methods and have found municipal institutions more stable even than their own, and during the war proved loyal to the land of their adoption. They have been prominent in provincial and community political life, so that each places in the front his own interests and welfare, and has rapidly become a part of all that pertains to Canadian national life.

CONTINENTAL IMMIGRANTS

(11) The third class of continental immigrants, some two-thirds in number of those who came from Great Britain to Canada, have proved likewise an important factor in a development, especially of the Canadian Northwest. Being to the extent of 90 per cent agriculturists, they formed a larger proportion of the homesteaders than did either of the two other classes. They occupied by preference those prairies, which were more or less wooded in the northern part of the territory and have proved industrious, law-abiding and careful to respect and obey the provincial and municipal authorities under whom they have been placed. Wherever such people have seemed to be objectionable, it has been in those cases where a simple rural people, uneducated in urban life, have come to settle in the suburbs of the larger cities and in contact with its complexities, distractions and temptations. But a single generation under the influence of modern educational institutions has

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already made them in many ways into good Canadians, and to them Canada and especially Saskatchewan owe the splendid development of agriculture, which has resulted in a wheat crop of some 400,000,000 bushels in 1922.

That the enormously rapid development of Canada, due to this immigration, should have created in the great growth of cities opportunities for a sudden and rapid accumulation of wealth was perhaps inevitable; and that this has stimulated an artificial society in many respects undesirable can scarcely be doubted. Many persons whose previous education and

training had been indifferent were foisted suddenly into responsible positions in society, which they have been scarcely able to support either in its privileges or responsibilities. But taken as a whole, with all the imperfections attaching to the conditions which have been herein outlined, it must be said with a full sense of all that is implied, that nowhere possibly during the past twenty years has there been developed a national life, based upon more enduring ethical principles or a nation more ready or more capable of assuming its highest responsibilities.

APPENDIX A

VALUE OF FOREIGN TRADE OF CANADA PER CAPITA

1868.....	\$35.53	1900.....	\$66.84
1873.....	57.37	1905.....	75.61
1880.....	36.05	1910.....	96.65
1885.....	41.19	1914.....	139.02
1890.....	42.98	1915.....	115.65
1895.....	41.71	1918.....	296.60

APPENDIX B

IMMIGRANTS SETTLING IN CANADA FROM 1867 TO 1920

1867.....	14,666	1907.....	124,667
1870.....	24,706	1908.....	262,460
1873.....	50,050	1909.....	146,908
1876.....	25,633	1910.....	208,794
1880.....	38,505	1911.....	311,084
1883.....	133,624	1912.....	354,237
1886.....	69,152	1913.....	402,432
1890.....	75,067	1914.....	384,878
1895.....	18,790	1915.....	144,780
1896.....	16,835	1916.....	48,537
1900.....	23,895	1917.....	75,374
1903.....	128,364	1918.....	79,074
1904.....	130,331	1919.....	57,702
1905.....	146,266	1920.....	117,336
1906.....	189,064		

APPENDIX C

TOTAL HOMESTEAD ENTRIES FROM 1900 TO 1920

1900.....	7,426	1911.....	44,479
1901.....	8,167	1912.....	39,151
1902.....	14,673	1913.....	33,600
1903.....	31,383	1914.....	31,829
1904.....	26,073	1915.....	24,068
1905.....	30,819	1916.....	17,030
1906.....	41,869	1917.....	11,100
1907.....	21,647	1918.....	8,319
1908.....	30,424	1919.....	4,827
1909.....	39,081	1920.....	6,732
1910.....	41,568		

The Canadianization of the Immigrant Settler

By J. H. HASLAM

President Saskatchewan Land Settlement Association, Regina

IN the consideration of this or any subject involving social problems in Canada it must be borne in mind that Canada is not an homogenous country. Both the language, ideals, and culture of British and French civilization prevail. This is true in the Maritime Provinces and Lower Canada, or what is now known as Quebec. This does not mean that the best of good feeling does not prevail among the different races in these provinces or that any of them are any the less attached to the true Canadian idea of nationhood and the idea of the British Commonwealth of Free Nations. In fact in the Maritime Provinces none are more prosperous and progressive than the descendents of the original French or Acadian Settler. They are good citizens whether judged politically, socially or commercially. In fact the French-Acadian farmer has perhaps made more marked progress during the last few years than his English fellow-citizen. This was scarcely true until the last few years. In the Maritime Provinces, however, the British note prevails. The French are learning English and speak it well; but the English do not as a rule speak French. The French retain, however, their conservative ideas. They are more frugal and thrifty than the English, more attached to the soil and have larger families. They are consequently displacing their English-speaking neighbors and those on the outskirts of the settlements where they are in the majority. This may not be a condition of affairs that is welcome to the Anglophile, but from a national standpoint it is hard to see where any harm can come.

THE FRENCH IN QUEBEC

The same tendency can be observed in Quebec where the French are in an ever-increasing ascendancy. The eastern townships a generation ago were largely peopled by descendents of early English settlers, many of them United Empire Loyalists. By what is known as peaceful penetration they are now becoming French. The French Canadian families are larger; the people are more attached to the soil and consequently they are gradually entering into the land to possess it. In Quebec, however, unlike the Maritime Provinces, the French is the prevailing note. French culture, French characteristics, large families, thrift, frugality and industry have established on the somewhat reluctant soil of the province the most prosperous people in Canada.

Although commonly supposed to be ultra-conservative—and they are so in religious and political matters and in the relations of the employer and employed—in economic matters they are the most advanced. There are more coöperative societies both for production, marketing and credit than in any province of Canada. This presumably through the influence of the Catholic Church, which has introduced the coöperative idea from France, Italy and other European countries, where it has sponsored coöperation to the great benefit of the people. The population of Quebec has increased much faster than that of the other Eastern Provinces, and is now increasing faster than any of the provinces of Canada. The emigration

from Quebec has been largely to the New England States, although there has been latterly considerable settlement in the Western Provinces. The French are overflowing in considerable numbers to the eastern counties of Ontario and are crowding out the English-speaking settler, as in the eastern townships adjoining Vermont. There is great respect in Quebec for the rights of the minority and of late years there has been little trouble between the races over either racial or religious questions, although during the war there was much friction over conscription. Although Quebec is French it is none the less Canadian.

The dominant note in Ontario is an aggressive Anglo-Saxon sentiment which seems to be growing stronger during the last decade. This perhaps is reaction from the evergrowing French population and influence of the eastern border. The Loyalist ancestry may have much to do with this sentiment. The rural population of this province is not growing. The families are every year becoming smaller and showing a tendency to enter industry and to drift into the cities which have made large increases in population during the past few years. Until the last twenty years the Western Provinces were largely settled from Ontario. There was very meager settlement from Europe and that in a few localities in Manitoba, principally Mennonites and Icelanders, who had no influence on the public policy of the country. So Canadianization as it applies to Western Canada may be interpreted as a very aggressive pro-Anglo-Saxon attitude such as would prevail in Ontario if that province were opening up vast areas of virgin land and attracting new immigrants of many nations and kindreds and tongues.

THE MENNONITES IN CANADA

Since the late nineties there has been a large immigration from Europe and this prevailed up to the commencement of the war. In no country in any period of its agricultural development have so many acres been brought under the plow as in Western Canada during this period, and this growth was largely because of the foreign settler. The settlement of foreigners in Western Canada commenced in 1873 when a colony of Mennonites were induced to come from Russia by the Canadian Government. They were then, and many of them are yet, very strict in their religious opinions and observances. They are purely agricultural and are very skillful in the practice of husbandry. It is said that the richest agricultural county in the United States, and perhaps in the world, is Lancaster County, Pennsylvania, which is mainly occupied by Mennonite farmers.

They went to Russia some hundred years before this on the invitation of Catherine the Great, who guaranteed them against persecution, for they had been subject to persecution and martyrdom in Switzerland, Holland and Germany. She gave them exemption from military service, for one of the strongest tenets of their belief is "Thou shalt not kill." They could practice their religion and customs as they saw fit without interference, and speak their own language, which is German; and, since their attachment to their language is as tenacious as to their religion, they were well content. This compact was well observed by the Russian authorities until about 1868 when they were notified that they would be expected to serve in the army at the end of ten years. They decided to leave Russia in a body. They were located in one of

the most fertile farming districts in the world in the Black Belt of southern Russia, with a comparatively mild climate. They hesitated about coming to Canada on account of the severity of the climate and for the reason that they could not grow many things that they were used to in Russia. They were, however, finally induced to come, and a large colony settled in Southern Manitoba in the richest part of the Red River Valley.

They were given a letter signed by J. P. M. Lowe, Secretary of the Department of Agriculture, which had fifteen clauses, one of which gave "an entire exemption from any military service," and another clause read as follows:

The fullest privilege of exercising their religious principles is by law afforded to the Mennonites without any kind of molestation or restriction whatever and the same privilege extends to the education of their children in schools.

The Mennonites interpreted this letter and the Order-in-Council, giving it validity as a solemn compact—a sort of Magna Charta. Until a few years ago the bargain as interpreted by the Mennonites was carried out to the letter by the authorities of Manitoba and Saskatchewan, to which latter province several large colonies of Mennonites subsequently moved from the original colony.

They were unmolested and carried on their affairs in their own way and kept very much to themselves. They became very prosperous, and the process of assimilation into the political and social life of the country was going on satisfactorily—albeit slowly. Under a new government in Manitoba a policy was adopted of hastening the process. They were ordered to attend the public schools, learn English and support the new schools in addition to their own. This policy was also partially adopted in

Saskatchewan. The result has been very disastrous. The Mennonites, true to their history, have refused to abandon their historic principles and are leaving Canada in large numbers, some to Mexico and some to South America. It will take several years for the movement to become complete, because they move gradually—but Western Canada has lost the Mennonites.

Many think that if the old policy had continued the Mennonites would in Western Canada, as in Eastern Canada and the United States, gradually have adopted our methods of living and merged into our civilization. One thing is certain. They are among our best producers.

ARRIVAL OF THE ICELANDERS

The Icelanders came to Canada about ten years later and settled around the shores of Lake Winnipeg. They had been fisher folk in the Fatherland. The movement made a great drain on the population of the homeland. The Icelanders have merged into our Canadian civilization very quickly. They are very ambitious and are natural politicians, several of them having become members of the legislature. They were very loyal to our cause during the war and made great sacrifices. If taking on our works and ways quickly is the best test of a settler's worth, then the Ice-lander has been a model settler. Notwithstanding that there are many highly prosperous Icelandic farmers in our Western Provinces of Canada, it is true that the Icelanders have not the same attachment to the soil as have other races who have migrated to Western Canada.

ARRIVALS FROM THE UNITED STATES

About 1900 the movement of settlers from the United States to Canada

commenced and reached its peak about 1910. The first arrivals were returning Canadians, and then followed a rush of people from the middle western states—the latter of no distinct type, descendants of Scandinavian and German settlers principally; but every race was represented including many of British origin. There never has been any question as to the assimilation of these people into our civilization. They had been through the melting pot, and, of course, purified in the process. Yet the most disloyal people we had to deal with in the war were some descendants of Germans who came to the Canadian West from Nebraska. They were Canadianized, but they could not forget their German ancestry. It may be said in passing that one cannot detect any difference in a Dakota, Minnesota or Montana village or town when one crosses the line from Manitoba, Saskatchewan or Alberta. The people of each country pass the boundary and repass without passport or hindrance. In fact, we copy the methods of our neighbors in many things. Our magazines and other periodical literature are largely of United States origin.

THE RUTHENIAN AND HIS IMPORTANT RÔLE

The most important foreign element in Canada's new population is the Ruthenian who came from old Austrian Poland and the surrounding districts in Russia and Roumania. They were attracted by the free homesteads and the high wages that were paid by the railway builders of the period. They came from oppression and the direst poverty. They were ignorant and gullible. They settled on land that the Canadian and American settler would not take. It was rough, stony and had much brush, but there was plenty of hay and water.

These people have made remarkable progress. Everybody works. They were peasants in Europe. They know the soil and love their farms; and while not such skilled husbandmen as the Mennonites, they soon learned our methods which, after all, are simple and somewhat crude. They prize their Canadian citizenship very highly. It was given to them after three years' residence and when they got the patents for their homesteads.

With their simplicity they have great pride and satisfaction in their new status. Thousands of their young men volunteered for the war. They had some difficulty in getting accepted. Their Canadian citizenship was ignored and they were treated as of alien enemy origin. It seems to be true that education does not make a man more proud of his origin or race. That is primal and it is scarcely competent for anyone to say that it is not a reasonable and natural feeling. The Ruthenian wants to learn the English language, he wants to become a good Canadian citizen. This is particularly true of those that are Canadian-born. But they also want to retain and to learn their own language and literature and this, too, seems reasonable and natural. There are about 250,000 of them in Western Canada, and among a large number of them in remote settlements as yet the process of assimilation has hardly begun. But that will come. It requires patience and toleration. The children are very quick to learn. They resent any attempt at forcing, and there is no doubt that there is a feeling of resentment in some quarters among the Ruthenians at the attempt to force the English language on them to the exclusion of their own in the schools—'twas ever thus.

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language and customs much sooner. But it is on the farms we want them. It has been wisely said that anyone makes a good settler who lives on and cultivates the land. The old idea of a generous tolerance to the immigrant seems to have produced the best results. There were many Russian-German Catholic colonies established near Regina about 35 years ago. The colonies are now breaking up and the younger generation are becoming good Canadians. They have good English schools and take great pride in them. Some of them have intermarried with Canadians. They are very prosperous and have as a rule large families.

CONCLUSIONS

On the whole the foreign immigrant has given Canada very little trouble. He has received no favors, but has had

to make his way through sweat and toil. He will eventually merge completely into our civilization and help to build what, as time goes on, will be a Canadian race.

It was of just such diverse elements that the Anglo-Saxon race was built up.

Saxon and Norman and Dane are we
Teuton or Celt or whatever we be.

The process takes time. It cannot be forced. The United States is now an Anglo-Saxon country and has become so with a comparatively small original British stock.

The absorbing and assimilating quality of the Anglo-Saxon race is its outstanding characteristic. It is so because it has never tried to impose its ideas with the big stick. It is plainly the right policy for Canada to adopt in its treatment of the immigrant.

Oriental Immigration

By T. H. BOGGS, M.A., PH.D.

Professor of Political Economy, University of British Columbia

THE question of oriental immigration commands the instant attention of the people of British Columbia. It lies close to the interest if not the heart of the inhabitants of this Pacific community of the Dominion. It is, however, enveloped in so thick a mist of dubious evidence and opinion that it is difficult oftentimes to ascertain the true merits of the case. It is not always easy to unmask prejudice and the promptings of political expediency.

In undertaking this brief survey of Asiatic immigration into Canada, a three-fold endeavor will be made to explain why the question has become so urgent an issue, to point out certain of the peculiar difficulties which beset the path that may lead toward a solution of the case, and to suggest a remedial course of action to the consideration of the various parties involved.

RESTRICTION OF ASIATIC IMMIGRATION

British Columbia as a whole does not welcome Asiatic immigration; indeed, latterly there has been abundant evidence to show that a great majority in the province strongly favor exclusion of laborers, at least, from the Orient. There are no doubt a few who believe in a policy of non-restriction. Some, moreover, believe in a limited immigration to serve industrial ends. That the overwhelmingly preponderant opinion is favorable to some form of rigid restriction may be presumed from the widespread popular concurrence in two resolutions recently passed in the provincial legislature. It may

be of interest to note that the first measure passed unanimously and that the second, after an ineffectual attempt at an amendment, likewise received unanimous assent. The main resolutions, stripped of their preamble, appear, respectively under date of November 20th, and December 5th, as follows:¹

Therefore be it Resolved, That this Legislative Assembly places itself on record as being in favour of the enactment of such amendment to the "Immigration Act" of Canada as is necessary to completely prohibit Asiatic immigration into Canada.

Therefore be it Resolved, That the Government of the Dominion of Canada be petitioned to grant its assent and accord its active assistance to the obtaining of an amendment to the "British North America Act," giving the province of British Columbia, at present most affected, the power to make laws prohibiting Asiatics from acquiring proprietary interest, in any form whatsoever, in agricultural lands in British Columbia, in the timber lands of British Columbia, in the mineral lands of British Columbia, or in the fishing or other industrial enterprises carried on within the province of British Columbia, and from obtaining employment in any of the above-mentioned industries.

And be it further Resolved, That the Government of the Dominion of Canada be respectfully requested to grant adherence on the part of Canada to no treaty or binding international obligation in any form whatsoever having the effect of limiting the authority of Provincial Legislatures as set out by the terms of this Resolution.

¹ Votes and Proceedings of the Legislative Assembly of British Columbia, Nos. 15, 34, and 35, Session 1922.

Additional evidence, indicative of popular feeling on the Pacific coast, appears in the fact that the representatives of British Columbia in the Dominion House of Commons, irrespective of party, vigorously urged, in the course of a debate on May 8, 1922, the future exclusion of Oriental immigrants.

REASONS FOR OPPOSITION

In attempting to explain the very widespread sentiment throughout the province, favoring drastic restriction, the opinion may be ventured that the question is essentially not one of theoretic race equality, but rather of practical administration. The reasons which underlie both the opposition to Asiatic immigration and the imperious emergence of the question as a burning issue may be regarded as two-fold in their nature. There are considerations which directly impinge upon the immediate convenience or welfare of certain groups in the community. There are other factors, related it is true to the foregoing, which make an appeal to perhaps a wider circle, affecting as they do the ultimate destiny of the province, if not indeed the Dominion as a whole.

Prominent among the first variety

of objections to the Asiatic is the claim that on account of his lower standard of living he can and does underbid the white laborer. Owing to the less expensive household economy of the Oriental laborer, and because of his willingness to accept less comfortable conditions of work, it is urged that his competition must undermine the relatively more advantageous position enjoyed by the Canadian workman. The reaction against the competition of cheap labor is entirely natural and is not without cause.

Immigration at bottom involves a conflict of standards. If the disparity between the standards of two countries be marked, the immigration "urge" toward the higher standard country will be intensified. And this almost certainly will be accompanied by a correspondingly heightened reaction. Doubtless through no fault of their own, the peoples of eastern Asia have a low standard of living. Accordingly a restriction of Asiatic immigration is imperative if the accepted standards on the Pacific coast are not to suffer. The fact that the Orientals as a class are industrious, law-abiding, and honest does not help the situation.

The competition of the Oriental is felt in many directions—in the salmon

LAND OWNED AND LEASED BY JAPANESE AND CHINESE IN BRITISH COLUMBIA

	NO. OF OWNERS OR LESSEES	TOTAL ACREAGE
Land owned by Japanese	492	8,385.78
Land owned by Chinese	116	5,664.61
Total	608	14,050.39
Land leased by Japanese	103	1,781.26
Land leased by Chinese	369	11,087.12
Total	472	12,868.38
Grand total lands owned and leased	1,080	26,918.77

fishing industry, retail trade, the tailoring business, agriculture, etc. Such competition, in one direction, is revealing itself in the increasing quantity of land held by Orientals. Instinctively perhaps it is looked upon as prophetic of the future, if rigid restriction be not practised. From the table on page 51, it will be noted that by 1920 somewhat over 26,000 acres in British Columbia were controlled by 1,080 Asiatics.²

Related closely to the question of Asiatic competition is the fact that the number of Orientals in British Columbia is increasing rapidly as a result both of continuing immigration and, among the Japanese at least, of the high average birth-rate. This question of numbers calls insistently for solution. For, as has been pointed out by Mr. John Nelson, an enlightened student of the problem, the Asiatic population of British Columbia, already numbering from fifty to sixty thousand, forms approximately one-tenth of the total population of the province, and it is being constantly and rapidly increased by a sustained tide of immigration and high birth-rate.

THE CHINESE

The Chinese drifted north to British Columbia from California after 1849. They came later in considerable numbers to build the Canadian Pacific Railway. Still later they entered domestic service, became truck farmers, and entered the laundry and gradually other lines of business. There are in Canada about 45,000 of them, of which number approximately 40,000 are domiciled in the Pacific province. This movement has continued in the face of adverse legislation and a popular attitude which, in the main, has not

been hospitable. A head-tax of \$50 upon each individual of Chinese origin not belonging to the exempt classes was first imposed in 1885. In 1901 the tax was increased to \$100, and in 1904 to \$500. Generally speaking, the exempt classes are merchants and their families, diplomatic and consular officials, their families and suites, and teachers, students, and men of science.

THE JAPANESE

The Japanese came later. Their immigration prior to 1900 was negligible. Since that date, however, some 21,000 have entered the country, most of them remaining in British Columbia. Following the arrival of 7,600 Japanese immigrants during the year 1908, an official inquiry was instituted into the reasons and general circumstances of the movement. In consequence, an understanding was reached with Japan whereby the Imperial Government of Japan undertook to limit the number of Japanese laborers going to Canada to 400 annually. It is often-times declared that the agreement has not been strictly observed by the Japanese Government, and that the number of Japanese immigrants has generally been far in excess of the specified number. It must, however, be recognized that under the terms of the agreement laborers only were to be restricted in number. No mention was made of relatives of laborers. Moreover, Japanese who have once been admitted to Canada may reënter the country without affecting the assigned quota. That the terms of the understanding between the two governments have not been subject to violation may be accepted in the light of the official pronouncement of Hon. Mr. Calder, then Minister of Immigration, in the House of Commons on April 29, 1919. "I have gone into

²Survey by Department of Agriculture of British Columbia, May 28, 1920.

the situation very carefully," Mr. Calder declared, "and I can tell the House that the agreement has been lived up to by the Japanese Government to the letter." And, alluding to the same question, in the course of a debate in the federal House, on May 8, 1922, the Prime Minister, the Hon. Mackenzie King, declared:

I know of no reason to believe that the Japanese Government have not ever since [1919] been equally vigilant in living up to the terms of the agreement.

Unlike the Chinese, the Japanese in the province reveal a rapid rate of natural increase. The number of female immigrants of the Chinese race has been negligible, whereas during the three years, 1918-20, for example, almost 50 per cent of the Japanese immigrants were women. The reaction upon the birth rate may be judged from the fact that in eleven years it changed from 1 Japanese to every 252 whites, to 1 in every 13.

THE EAST INDIAN

The third Asiatic race involved in British Columbia's Oriental problem is the East Indian, popularly known as the Hindu. The East Indian movement which began in 1905, quickly assumed large proportions, nearly 5,000 entering Canada during the two years 1907 and 1908. The tide was abruptly checked, however, in 1909, by bringing Indian immigration within the scope of Section 38 of the Immigration Act, which provides for the exclusion of immigrants who may come to Canada otherwise than by continuous journey from the countries of which they are natives or citizens, and upon through tickets purchased in those countries. The necessary transportation facilities are lacking and hence immigration from India is effectually controlled by this

general regulation. The East Indians in Canada number about 5,000, practically all of whom are on the Pacific Coast.

It will not be necessary to do more than mention the second group of reasons underlying popular opposition to Asiatic immigration. These considerations, less directly affecting the everyday lives of the people, are related, however, to the foregoing ones which have received somewhat more attention.

NECESSITY FOR CAREFUL IMMIGRATION RESTRICTIONS

Thus we are rightly enough reminded that even a moderate degree of cultural assimilation, or personal adaptation to modes and standards of the adopted country, cannot take place unless immigration be narrowly restricted. It is to the interest of the Canadian people as well as to that of the Asiatic residents here that the latter should be culturally assimilated as early as possible into Canadian life in order to avoid "a government within a government." To this end, owing to the wide divergence between the racial antecedents, political traditions, and social habitudes of the people of the Dominion and of the immigrants from the Orient, a rigid limitation of numbers is imperative. A policy of rigorous restriction is, moreover, called for on the ground that lasting benefit is not likely to accrue to either of the two groups of people unless harmonious relations prevail between them. A considerable immigration of Orientals will lead to disharmony, in consequence of which injustice will almost inevitably be visited upon the immigrant. And, finally, restriction is urged by many through the fear that the very destiny of Western Canada must rest upon the decision that shall be reached on this issue. They prefer

the peaceable policy of restriction, drastic as it may be, to the dread spectre of open conflict at some future time.

CERTAIN DIFFICULTIES AND THEIR SOLUTION

There are certain peculiar difficulties lying in the path which cannot be disregarded. But happily they are not beyond solution. In the first place the East Indian immigrant is of course no less a citizen of the British Empire than the Canadian himself. His exclusion from the Dominion, therefore, must have a bearing on imperial relationships. Fortunately, however, it is now conceded even by British Indian leaders that the Canadian people possess an unquestioned right to determine the character of their population elements. In the second place, Japanese immigration into Canada involves Anglo-Japanese treaty relations.² Happily here, too, Canadian rights and powers are not narrowly limited. A further difficulty is presented in the entirely natural race pride of the peoples of eastern Asia in their ancient civilizations reaching back into antiquity. The solution effected must be in accord with the best traditions of international courtesy. Needless affront must not be offered to the legitimate pride of race of the Asiatic. This question on its reverse side reveals an additional difficulty. There is present in British Columbia, as likewise is the case in California, Australia, and Natal, a more or less deep-seated racial prejudice against the colored races of Asia. Not a little of this prejudice is irrational and blindly jingoistic. The restrictive policy adopted should not be conceived in a spirit of exasperation or hysteria.

² See Treaty Series, 1911, No. 18. Agreement between the United Kingdom and Japan signed at London, July 13, 1911.

FUTURE REMEDIAL COURSE OF ACTION

In venturing a remedial course of action for the future the writer would concede at once the necessity of rigid restriction of all Oriental immigration, even to the point of total future exclusion of all Asiatics, other than tourists, bona fide international traders and students in university or technical courses.⁴ However, such total future exclusion, in the opinion of the writer, should be accompanied by the conferment by the people of British Columbia of full rights of citizenship within the province upon all Orientals who become naturalized. If a policy of total exclusion for the future be adopted without the grant of citizenship privileges upon naturalized citizens, the future cannot fail to be productive of misunderstanding and mutual recriminations. Exclusion not expulsion is urged. Expulsion of those already here is utterly indefensible. Moreover a permanent denial of full citizenship privileges to naturalized Orientals cannot be justified on high grounds of justice nor on the dubious grounds of expediency.

The Dominion Franchise Act is subject to such limitation in its operation within any one province as may be imposed by the provincial franchise act of the province concerned. In Canadian provinces other than British Columbia, a naturalized Oriental enjoys the rights of a citizen, including the right to vote. In British Columbia, however, the voting privilege is denied.

In support of the plea that full citizenship privileges should accompany naturalization, it may be pointed out that in Australia more than 1,200 out of the 2,000 resident East Indians

⁴ On this point, see statements of Hon. H. H. Stevens, recent Dominion Minister of Trade and Commerce, on the floor of the House of Commons, Sessions of 1912-13 and 1922.

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enjoy the franchise, and that 500 Indians in New Zealand possess the same right. It may be added that the Hon. Mr. Sastri, a distinguished East Indian, has conceded the right of Canada to practice total exclusion. His request, therefore, that citizenship privileges be conferred through naturalization upon resident East Indians in Canada cannot be viewed as imperilling the quality of Canadian standards or civilization. The general views of Mr. Sastri on this matter

appear to be concurred in by many enlightened members of the Japanese and Chinese races resident in British Columbia.

Finally it may be urged that the policy of denying voting rights permanently to a considerable section of the population of one province of the Dominion can scarcely be deemed to be to the ultimate advantage of even the white people themselves. A democratic country cannot well be stratified either socially or racially.

Canada's Immigration Policy

By ROBERT J. C. STEAD

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THE immigration policies of the Dominion of Canada have been, and are, of far-reaching interest and effect, not only to the people of the Dominion but also to the outside world. At no point, perhaps not even in the matter of international trade relationships, does Canada come in more intimate contact with her national neighbors than in the framing and application of her immigration policies. When it is remembered that Canada, with one-sixteenth of the world's land area and probably more than one-sixteenth of its natural resources, has as yet only about one-half of one per cent of the world's population, the part which immigration is destined to play in the future development of the Dominion, and the reaction which it will have upon other countries, are somewhat appreciated.

RELATION OF IMMIGRATION DEVELOPMENT

Canada's development has been, and is, inseparably interwoven with immigration. All that Canada is today she is because of the immigrants who have come to her shores, and every citizen who does not trace his ancestry to the original natives, is either an immigrant or the descendant of immigrants. It has been by this flow of population from other lands that the development of Canada to its present status has been achieved.

This development, up until about the beginning of the present century, was largely of an undirected character. Led by the spirit of adventure or the desire for self-betterment, individuals

and groups migrated to Canada from portions of the United States, from most of the countries of Europe, but most particularly from the British Isles. Impetus was given to such movements from time to time by unusual or artificial conditions, such as, for example, the state of affairs which prevailed in the new American Republic at the close of the Revolutionary War, when large numbers of Loyalists migrated to Nova Scotia, New Brunswick and portions of Ontario, and laid the foundations of what is now the most permanent Canadian stock of Anglo-Saxon ancestry, but for the most part the movements were small, detached and unorganized. To sketch in any detail the history of early immigration to Canada would be virtually to recount the history of the country from the discoveries of Cabot, Cartier and Champlain to modern times, but it is actually within the last fifty years that the greatest increases in Canada's population have occurred. In 1871—four years after the consummation of Confederation and 331 years after the first attempt to plant a colony in Canada—the population of the entire country did not exceed 3,690,000. The increase in population during the decade 1871 to 1881 was 635,000; during the decade from 1881 to 1891 it was 508,000; and from 1891 to 1901 it was 538,000.

WAYS AND MEANS

It was not until the first decade of the twentieth century—aptly described by Sir Wilfrid Laurier as Canada's century—that the decennial re-

turns showed an increase in population exceeding one million souls. This period also marks the adoption, or at least the fructification, of a vigorous and deliberate policy toward filling up the vacant spaces of Canada with human beings. The keystone of that policy was free land, but closely associated with it was the rapid development which characterized the first dozen years of the new century. This development took many forms; it embraced the building of immense railway systems, elaborate irrigation enterprises, and young but ambitious cities. Labor was to be found for all, and the flood of population, while fundamentally dependent upon the settlement and development of the farm lands of the country, flowed in a considerable volume into railway camps, lumber woods, and the various channels for rough labor and artisans afforded by the rapidly growing cities and towns.

The policy of granting free land to those who would undertake to live

upon it and develop it was, of course, no new experiment. The first land in Western Canada granted under such a policy was filed upon on July 2, 1872—just a half a century ago—and the considerable degree of development which had occurred in Manitoba previous to the year 1900 was largely the outcome of that policy of free land for settlers. Closely associated with the free land grants was the practice established by the Canadian Pacific Railway and in a lesser degree by the Hudson's Bay Company of selling the immense areas of land which had come into their possession by virtue of their agreements with the Government at prices so low and on terms so generous that it became a saying that in many cases the purchased lands were as cheap to the settler as those which were granted free.

A glimpse in detail at the Canada-ward movement of population during the high tide period which met a sudden ebb with the outbreak of the Great War may prove of interest:

IMMIGRATION TO CANADA FROM THE BEGINNING OF THE TWENTIETH CENTURY TO THE OUTBREAK OF THE GREAT WAR

	BRITISH	FROM THE U. S. A.	OTHER COUNTRIES	TOTALS
Fiscal year ended June 30, 1901.....	11,810	17,987	19,352	49,149
" " 1902.....	17,259	26,388	23,732	67,379
" " 1903.....	41,792	49,473	37,099	128,364
" " 1904.....	50,374	45,171	34,786	130,331
" " 1905.....	65,359	43,543	37,364	146,266
" " 1906.....	86,796	57,796	44,472	189,064
Nine months ended March 31, 1907.....	55,791	34,659	34,217	124,667
Fiscal year ended March 31, 1908.....	120,182	58,312	83,975	262,469
" " 1909.....	52,901	59,892	34,175	146,968
" " 1910.....	59,790	103,798	45,206	208,794
" " 1911.....	123,013	121,451	66,620	311,084
" " 1912.....	138,121	133,710	82,406	354,237
" " 1913.....	150,542	139,009	112,881	402,432
" " 1914.....	142,622	107,530	134,726	384,878
Total.....	1,116,352	998,659	791,011	2,906,022

The close association which existed between the movement of population and the issue of free lands is indicated by the following table showing the number of entries for homesteads during the same period.

It will be noted that the homestead entries reached their peak in 1911 and the immigration movement two years later, in 1913. Two conclusions are suggested by this fact: First, that the accessible homestead lands were being exhausted, and second, that the wave of development which accompanied their settlement had increased the demands for non-agricultural immigrants until they represented a greater proportion of the whole than in the earlier stages of the movement.

THE GREAT WAR AND ITS EFFECT

Indications that the wave of immigration had, for the time being at least, passed its crest, were not lacking in the latter part of 1913 and the earlier part of 1914, before the sudden outbreak of war interjected a new and unforeseen factor. Immigration from the enemy countries was, of course, immediately and completely suspended, and from Great Britain and her Allies practically so, the movement from the United Kingdom dropping from 142,-

622 in the year ended March 31, 1914 to 8,664 in the year ended March 31, 1916. The movement from the United States was similarly, although not so seriously, affected, dropping in two years from 107,530 to 36,937. While the United States remained neutral, Canada, as a warring nation, was at an obvious disadvantage as a field for new settlers, and after the United States cast in its lot in the war the magnitude of the preparations undertaken had a similar effect on immigration returns. The lowest figures in Canada's immigration since the beginning of the present century were touched in 1916, and from then until 1920 the yearly arrivals were only about 25 per cent as numerous as during the years immediately preceding.

AFTERMATH OF THE WAR

Many opinions were held as to the probable trend of immigration events after the close of the war, and there was a general anticipation that the movement to Canada would again be very heavy, and probably exceed all previous records. This anticipation was not realized, for a number of reasons. Canada, in common with all other countries, experienced a share of the dislocation of business and the

TABLE OF HOMESTEAD ENTRIES

Fiscal year 1901.....	8,167
" " 1902.....	14,673
" " 1903.....	31,383
" " 1904.....	26,073
" " 1905.....	30,819
" " 1906.....	41,860
Nine months ended March 31, 1907.....	21,647
Fiscal year 1908.....	30,424
" " 1909.....	39,081
" " 1910.....	41,568
" " 1911.....	44,479
" " 1912.....	39,151
" " 1913.....	33,600
" " 1914.....	31,829
Total.....	434,802

industrial uncertainties of the reconstruction period.

The demobilization of the Canadian forces, coincident with the suspension of all war activities, brought about a surplus of labor in local markets which made it impracticable for the Canadian Department of Immigration and Colonization to extend inducements to the vast numbers of laborers available at that time as immigrants. The welfare of the country seemed to demand that, as a rule, only those should be admitted who were in a position to assist in developing its natural resources, chief among which is its fertile agricultural land. Farmers and farm laborers became more than ever the objective of the Department of Immigration and Colonization, and these classes, together with domestic workers, for whom there is a continual demand, are still the only classes being generally sought as immigrants.

Other factors which contributed to the depression of immigration figures as compared with the period immediately preceding the war were the high cost of ocean and land transportation and the balance of exchange against the capital of British and European immigrants, coupled with the generally impoverished condition of some of the countries which had formerly been contributors of immigrants, and to the fact that, although great areas of land were still available as free homesteads, they were now located for the most part at considerable distances from railways. The policy of the Department has been not to encourage settlement in localities likely to require additional railway construction at an early date.

NEED FOR RESTRICTIVE AND SELECTIVE IMMIGRATION

During the same period there has been a growing popular sense that the

immigration activities of the Dominion should be increasingly selective, and the policies of the Department have sought to conform to public opinion in this regard. The result is that there are two distinct and, in a sense, opposite phases of Canadian immigration activity. One is restrictive, designed to prevent persons who are undesirable in themselves or who, although acceptable in themselves, are for various reasons unable to become producing factors in Canada at the present time, from landing in the country. This may be described as the negative side of immigration work. On the other hand is the positive side—the side which is engaged in securing settlers of the type desired.

A MEANS TOWARDS EXPANSION

In the light of the preceding paragraph it will be understood that the positive activities of the Canadian Department of Immigration and Colonization in other countries are limited to those from which a large percentage of desirable immigration may be expected. The process of selection begins with selecting the country from which immigrants are to be sought and proceeds with the selection of the individual citizen of that country. The first step in this process is the creation of a desire on the part of that type of citizen likely to prove a good settler in Canada, to migrate to the Dominion. This is, broadly speaking, the publicity work of the Department. It is pursued by a number of means:

- by advertisements in papers circulating among the agricultural and domestic working classes;
- by exhibitions of Canadian agricultural products at the agricultural fairs;
- by lectures on Canadian agricultural conditions and opportunities, and
- by the generous distribution of

literature dealing with such opportunities;
 by motion pictures visualizing agricultural life in Canada;
 by articles in the press designed to promote a better understanding of Canadian conditions and, in some cases, a more sympathetic attitude toward Canada;
 and by such other means as prove available.

A peculiar and far-reaching phase of this publicity work is an effort to make Canada better known to the school children of the United States and Great Britain. This is being accomplished through supplying the schools with text books in which are maps of the Canadian provinces and pictures of Canadian scenes, and in which the truth about Canada is set forth in simple, straightforward language appropriate to the class room. The distribution of these text books runs as high as half a million copies in a year. They are supplied free to schools in the United Kingdom and the United States on the request of the school principals, and the demand is always greater than the financial resources of the Department will permit it to supply. This is long-range publicity work; it has to do with the rising generation, and its harvest may not be reaped for years, but it is spreading correct information about Canada and making the grotesque ideas concerning the Dominion which have so long prevailed among even well-informed Britishers and Americans impossible in the rising generation.

THE ESTABLISHMENT OF IMMIGRATION OFFICES

Having created the desire on the part of the prospective immigrant to migrate to Canada, it becomes necessary to place at his disposal facilities

for personal information and advice. For this reason immigration machinery consisting of some eighteen offices in the United States and twelve in the United Kingdom, with European offices at principal ports on the continent, has been established. At these agencies the prospective immigrant may learn further details about the country which cannot very well be set forth in the departmental publications; may inform himself as to the restrictions applied to immigrants and the conditions to which he must conform; may obtain information and advice concerning the movement of himself, his family and his effects; and may begin to arrive at a conclusion as to the portion of Canada in which he will locate. If he belongs to the unacceptable classes he may also, through the medium of these agencies, spare himself the expense and disappointment of an unfruitful trip to Canada. There is little occasion for any immigrant experiencing the disappointment of being rejected at the port of entry in Canada if he has sought and been guided by the advice of the Canadian immigration officer in his native land.

While it is impracticable for Canada to completely select her immigrants at the point of origin, it being obviously impossible to place officers at every foreign seaport in the world to turn back immigrants at these ports, so far as Great Britain and Ireland are concerned the field is well covered, and the machinery is gradually being extended in Europe. The right is retained, in any case, to reject the immigrant at the Canadian port, but when it is remembered that out of 74,262 immigrants from the British Isles during the fiscal year ended March 31, 1921, it was necessary to reject at Canadian ports only 193 individuals—that is, one person rejected for every 385 who landed—it will be seen that the hard-

ships arising from rejection of these classes have been reduced, perhaps, as much as is humanly possible.

IMMIGRATION REGULATIONS

The Canadian immigration regulations debar from Canada immigrants of the following classes:

1. Idiots, imbeciles, feeble-minded persons, epileptics, insane persons and persons who have been insane at any time previously.

2. Persons afflicted with tuberculosis or with any contagious or infectious disease.

3. Persons who are dumb, blind, or otherwise physically defective, unless security is given against such becoming a public charge in Canada.

4. Persons over 15 years of age who are unable to read. Exception is made in the case of certain relatives.

5. Persons who are guilty of any crime involving moral turpitude; persons seeking entry to Canada for any immoral purpose.

6. Professional beggars, vagrants, and persons liable to become a public charge.

7. Persons suffering from chronic alcoholism or the drug habit, and persons of physical inferiority whose defect is likely to prevent them making their way in Canada.

8. Anarchists, agitators and persons who disbelieve in or are opposed to organized government or who advocate the unlawful destruction of property.

9. Persons who have been deported from Canada for any cause and persons who have been deported from any British dominion or from any allied country on account of an offence committed in connection with the war.

10. Immigrants who are nationals of Germany, Austria, Hungary, Bulgaria, or Turkey.

Other restrictions also exist, or may be applied from time to time, particulars of which may be obtained by any intending immigrant from the nearest Canadian Government agent.

By an Order in Council at present (November, 1922) in effect the landing in Canada of any immigrant is prohibited except as hereinafter provided:

The Immigration Officer in Charge may admit any immigrant who otherwise complies with the provisions of the Immigration Act, if it is shown to his satisfaction that such immigrant is,—

1. A bona fide agriculturist entering Canada to farm and has sufficient means to begin farming in Canada.

2. A bona fide farm laborer entering Canada to follow that occupation and has reasonable assurance of employment.

3. A female domestic servant entering Canada to follow that occupation and has reasonable assurance of employment.

And provided further that the Immigration Officer in Charge may admit:

(a) The wife and family of any persons legally admitted to and resident in Canada who is in a position to receive and care for his dependents.

(b) The national of any country in regard to which there is in operation a special treaty or agreement or convention regulating immigration.

(c) Any British subject entering Canada directly or indirectly from Great Britain or Ireland, the United States of America or any self-governing British Dominion or Newfoundland, who shall satisfy the Immigration Officer in Charge at the port of entry that he has sufficient means to maintain himself until employment is secured.

(d) Any American citizen entering Canada from the United States, provided it is shown to the satisfaction of the Minister of Immigration and Colonization that his labor or service is required in Canada.

CANADA'S CARE OF HER IMMIGRANT

So much for the immigrant before he arrives in Canada and makes his start on the road toward Canadian citizenship. What becomes of him afterward? Any assumption that the Canadian Government feels no more

concern for his success once he has landed in the country would be founded on very incomplete information. Obviously it is not in the interests of Canada to encourage that type of immigrant which is going to lean unduly upon the Canadian Government for support; the qualities of personal resourcefulness and sturdy personal independence are among the first requisites in new settlers and in the foundation work of a great nation. These qualities should never be impaired by

over-paternalism, or by a generous or misguided disposition to pauperize. When this has been said it must still be granted that among considerable movements of new settlers there are sure to occur individual cases calling for individual treatment, and if the histories of such cases could with propriety be made public they would go far to correct an opinion that the Government of Canada has followed a "sink or swim" policy in dealing with its newly arrived immigrants.

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The Aboriginal Races

By DUNCAN C. SCOTT, LITT.D.

Deputy Superintendent-General, Federal Department of Indian Affairs, Ottawa

ANY comprehensive or reliable information as to the aboriginal population of British North America at the time of Champlain, or at the date of the Conquest, is non-existent, and there is no basis for a comparison between the native population of today and that of past times.

We state roughly that our natives, recognized legally as Indians and Eskimos, number 105,000 persons, whose descent is through the male line. This population includes many of mixed blood but excludes the progeny of legal marriages between white men and Indian women, the offspring of such unions being counted as citizens. They do not receive the protection of such special legislation as exists for Indians. This round number of 105,000 must be much smaller than any figures representing the population of an earlier day. If we could know accurately the number of natives living at the time of Confederation, the comparison would show a material decrease. The native population of British Columbia at the time of the union with the Dominion was stated, with fair accuracy, to be about 70,000; it is now counted as 25,000. The decrease of 64 per cent in fifty years was very rapid, assuredly more rapid than in any other province, but there has been undoubtedly a very heavy loss of native population in all provinces since Confederation.

RAVAGES OF DISEASE

It is to be hoped that the lowest point of the general ebb has been reached, but it may be said at once that even

now the birth rate is the important factor in stabilizing the population. The death rate is abnormally high. The inroads of tuberculosis and the losses by epidemics constantly operate to counteract the increases which might be expected from the favorable birth rate. During the epidemic of influenza, 1918-19, we lost 6,000 Indians, and such diseases as smallpox and measles take annual toll, but tuberculosis is the real foe of the aborigine. It is possible to fight this scourge in some measure in certain localities, but the conditions of aboriginal life are so varied that it is impossible to meet them all with effective methods. In Indian communities, close to civilization, there is a constant education going on in the schools; the nature and the danger of the disease is known to the Indians, and they have recourse to the sanatoria provided for the white population, but it is impossible to follow with prophylactic advice and remedies Indians whose livelihood is gained by hunting and fishing. Exposure, irregular and often sparse food supply, crowded, overheated shacks and other departures from the older and more sanitary life of the wigwam and teepee, all these aid the development and hasten the progress of the disease.

THE RESERVE SYSTEM

The location of Indians on special Reserves of land has been the practice from the earliest times in this country. This system was designed to protect them from encroachment and to establish for them a sort of sanctuary where they could develop unmolested, until

advancement had rendered possible their absorption with the general citizenship. The Reserve System was intended to insure the continuation of the tribal life and the life of the individual as an Indian, as well as to render possible a continuous and consistent administrative policy directed toward civilization. If there had been strict confinement to Reserve limits, the system would have had many objectionable features, but neither officials nor Indians considered the Reserve as more than a "pied de terre." The Indians wandered away from it and returned to it as the nomadic instinct prompted, no doubt bringing back much undesirable knowledge and experience. But this mingling with the outside world was less undesirable than a strict confinement within boundaries would have been, even had such confinement been possible. We can now see the results in the older provinces of such an interplay of forces and tendencies. We find a native population to a certain degree intimate with the usages of civilized life. The individual Indian is either maintaining himself and his family away from his tribal reserve by mercantile or industrial pursuits, or living upon the Reserve and obtaining his subsistence from its soil.

ENFRANCHISEMENT

The social condition of the Reserve Indians does not differ materially from the social conditions of those who have separated themselves from the tribal relationship. Inter-marriage with white persons has affected both classes and has prevented the evils of marriage in closely related family groups. Enfranchisement, that is the removal of all the civil disabilities which are borne by the Indian, and his mergence in the general citizenship, is the goal of all administrative effort. It is possible,

under the present law, to enfranchise Indians of both classes, but the problem of enfranchisement is less difficult for those who own no land upon a Reserve. These are readily merged in the ranks of full and free citizens by the payment to them of their share of the capital funds of their tribe or band. When enfranchisement involves the allotment of land in fee simple and the disintegration of the Reserve, the matter is not so free from complications, but through enfranchisement the Indians and the Indian problem disappears and the effort towards civilization is consummated. The older sections of the Dominion exhibit the process towards enfranchisement in action from day to day, but it has hardly begun to work in the newly settled districts or in the old provinces among hunting and fishing Indians. Enfranchisement is sometimes confused with the exercise of the franchise. In provincial elections no Indian residing in Manitoba, Saskatchewan, Alberta, British Columbia, or New Brunswick, has the right to vote, but in the other provinces, if he does not reside on a Reserve, and is otherwise qualified, he may vote. In Dominion elections those Indians only who served in the late war can vote.

The following table gives the native population of Canada by provinces:

Alberta.....	8,837
British Columbia.....	25,694
Manitoba.....	11,583
New Brunswick.....	1,846
Nova Scotia.....	2,031
Ontario.....	26,411
Prince Edward Is.....	292
Quebec.....	13,366
Saskatchewan.....	10,646
Northwest Territories.....	3,764
Yukon.....	1,528
Total.....	105,908
Eskimos.....	3,290

EFFECT OF COMPETITION ON INDIANS

It will be observed that Ontario has the largest Indian population, at least 50 per cent of the total of Indians in that province being dependent for a livelihood to a greater or lesser degree on hunting and fishing. A variable percentage in all the provinces is likewise so dependent. This is the natural manner of life and although the Indian is by no means superior to the white man in this, his native pursuit, he is yet the most important source of supply to the fur trader. In British Columbia he is a highly important factor in the labor of the salmon fishery, not only in the taking of the fish but in the preparation in the canneries of the product for the market.

Of late the presence of competition in the hunt has begun to bear heavily upon the Indian and his maintenance problem becomes more difficult as the years go by. In the old days, when Indians alone were in the woods, fur was taken with care and with due concern for the future. The established traders took a paternal interest in the hunters, an interest perhaps not more elevated than their interest in the beavers or foxes, considering the animals who trapped and the animals who were trapped as of equal importance to a successful business venture, but the interest evoked by the situation at least ensured a fair supply of food and clothing for the Indian. The condition was a condition of bondage without evitable hardship, but the competition of rival traders brought a new element into the problem. Allegiance to the rivals was set up and therefore discrimination and jealousy, and the lot of the Indian became harder. Now that the petty trader has invaded the field,—the foreigner without a permanent establishment and with only cash in hand,—further

difficulties have arisen and the incursions of white trappers have put a last tangle into the involved interests. No stringency of regulations can do more than postpone the final disappearance of the fur-bearing animals and the complete alteration in the source of native livelihood. In some districts the day is far off, in others it is near, and the Government has now to supplement the food supply which has failed for all but the more vigorous hunters.

It will be gathered from this sketch that the policy is to protect the Indian, to guard his identity as a race and at the same time to apply methods which will destroy that identity and lead eventually to his disappearance as a separate division of the population. This policy might be frustrated by the gradual extinction of the race while yet in the tutelary stage. But that is hardly to be feared. The Indian has proved that he can withstand the shock of contact with our civilization, that he can survive the manifold evils of that contact, and transfer his native energy into the channels of modern life. The original stamina of the tribe to which he belongs is the root factor in his survival. Certain tribes have proved to be too feeble in their resistance to the new influences and will disappear, while others have overcome the initial evils and have increased and flourished.

THE ESKIMOS

The Eskimos, who number about 3,300, are not the least interesting native group in the Dominion, in fact they inspire respect by their vigorous spirit and industry. The quality of such smattering of our civilization as has reached them has been inferior and has been detrimental. The rude whaler first, and afterwards the casual fur-hunter have not been worthy

specimens of our race and the adoption of such habits as they could acquire from such associates and the unfortunate dissemination of some of our most deadly diseases have been all

against the permanence of the race. It is doubtful whether it will long survive except in locations where the native life cannot be contaminated by outside influences.

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Agriculture in Eastern Canada

By W. C. HOPPER, B.S.A.

Field Husbandman, Central Experimental Farm, Ottawa

ONLY three hundred years have passed since agricultural operations were first begun in the territory now known as Eastern Canada. Vast forests, trackless except for the trails of the Indians, covered the greater part of this immense area of over seven hundred and seventeen million acres. The innumerable rivers and lakes, as yet untouched by commerce and undisturbed by sawmills, were teeming with fish. Game of all kinds was abundant. The beaver, the otter, the bear and other animals prized for their fur lived here unmolested by the white man's rifles and unenticed by the white man's traps. The homes of many tribes of red men, scattered along the shores of the different bodies of water, were the only members of the human family within the border of this great territory.

One can hardly picture these scenes prevailing in the now modern and progressive provinces of Eastern Canada. Nearly half a million rural homes with their farm buildings and 48,785,860 acres of cultivated land now replace the virgin forests. Rural telephones, to the number of 155,643 and 3,501 rural mail routes carry the messages to and from many of these farm dwellings. Several million head of live stock and great flocks of poultry form a large part of the wealth of this great country. Fifty-one cities, 297 towns, and 404 villages are now scattered over this land. Many hundred miles of electric railways, 140,460 miles of highways, and 19,626 miles of steam railroads serve a population east of the province of Manitoba of 6,295,000. A civilization exists today in the

five eastern provinces of the great Dominion, which well repays the faith and untiring efforts of the brave pioneers.

EARLY SETTLEMENT

Agricultural development was begun in 1605 at Port Royal (now Annapolis) where Sieur de Monts and Samuel de Champlain from France established a colony. Here the first wheat in America was grown, the first mill in Canada established, the first boat in America built, and here the waters were reddened with the first bloodshed in the long and bitter struggle between the French and English for the supremacy of America. In 1608 Champlain, who in that year laid the foundations of the city of Quebec, said of this newly discovered land: "It will be a great grain and grass producing country." In 1617 Louis Hebert landed in New France, as the province of Quebec was then called, and began at once to clear and cultivate the land which is now the site of the Cathedral of Quebec. This Frenchman was the first farmer in the province of Quebec. In 1626 Champlain established a farm at the foot of Cap Tormente a few miles from Quebec City. Cattle, sheep, swine and poultry were raised here, the original stock having been brought from France.

Although there were some farming operations carried on, the principal business of the early settlers of that time was hunting, trapping and fur trading. The Indians would readily give up great quantities of valuable furs for a few gaudy trinkets and the early trader became wealthy at the expense of the poor ignorant red man.

The first settlement at Port Royal was located in the land called Acadia. This comprised both our present provinces of Nova Scotia and New Brunswick. In 1686 the population of Acadia numbered 851 souls. They grew wheat, oats, flax and raised cattle, horses, sheep, swine and poultry.

The first settlement in Prince Edward Island, for the purpose of cultivation, was in 1713. This island was ceded to England by the French in 1763.

Although Jacques Cartier discovered the province of New Brunswick in 1534, practically no agricultural development occurred until an English colony was established at Maudslayi a few miles from the present city of Fredericton in the year 1762.

The political status of the early French colonies was of necessity greatly influenced by the conflicts taking place in Europe between France and England. Warfare was frequently carried on between the French colony in Acadia and the British colonies of New England. In 1710 Acadia finally became a British colony and in 1755 the Acadians of French origin who refused to swear allegiance to the British crown were expelled from the colony. The greatest legacy they left was the dykes which they had built, redeeming great areas of very fertile soil, and the fruit trees which they had planted.

New France remained a French colony until Quebec was taken in 1759 after the battle of the Plains of Abraham.

Ontario up to this period was practically uninhabited except by the Indians. In the year 1776 history tells us there were only about 1,000 French settlers in this province located along the shores of the Detroit River.

GROWTH OF POPULATION

The natural increase in population was augmented by colonists from France and Great Britain. From 1750

to 1754, settlers to the number of 6,000 were "planted" in Nova Scotia by the English, and many French settlers continued to arrive and set up homes in New France. After the American War of Independence about 70,000 Loyalists who preferred to live under British rule immigrated to Canada. Ontario received about 10,000, who became the pioneers of this province. They settled mainly in the Niagara Peninsula. Loyalists also settled in that part of Quebec south of the St. Lawrence River called the Eastern Townships, and many thousands became the pioneers in different parts of New Brunswick and a large number settled on the abandoned Acadian farms of Nova Scotia. Some of the Acadians expelled in 1755, returned later to their homes in Nova Scotia and a settlement of Germans was later established in Nova Scotia at Lunenburg. After the European wars of 1816 a considerable flow of immigration from the British Isles started. All the provinces benefited by an increase in population. Sturdy English, Scotch, and Irish settlers drove back the forests and redeemed the fertile soil.

The population of Eastern Canada was further increased by the British colonists from the New England States, who refused to fight against England in the War of 1812. In 1752 the population of Prince Edward Island was 2,014, which was increased to 23,226 by 1827. The population of Nova Scotia (which included the present province of New Brunswick) in 1767 was 14,000. In 1759 Quebec's population was 65,000. In 1812 the population of Ontario was 80,000, which increased to 213,000 in 1830.

DIFFICULTIES IN ESTABLISHMENT OF AGRICULTURE

Agriculture in the early history of this country developed very slowly.

The early settlers were not farmers but tradesmen, mechanics and discharged soldiers with no knowledge of farming, and it naturally took some time for them to become acquainted with their new vocation. The larger returns which they received from fur trading, hunting and trapping, prevented them from giving up these occupations for the cultivation of the soil. The removal of the virgin forests was a gigantic task, and the first and to some extent the second generation in Eastern Canada were more occupied in clearing the land than in cultivating the soil. Even down to the year 1859 the value of forest products exported exceeded that of agricultural products.

The absence of markets gave the settlers no incentive to produce any more than they required for actual sustenance of their families. The lack of faith in the possibilities of climate and soil for crop production which was entertained not only by many of the colonists but also in England greatly hindered the rapid development of agriculture. In Oliver Goldsmith's history published in England in 1750, we read that "Nova Scotia was a colony where men might be imprisoned but not maintained."

Poor communication which Prince Edward Island had with the mainland and the ownership of the land by English proprietors from 1759 to 1875 hindered the growth of agriculture. The Indian in conquests against the British settlers in Acadia, after 1710, destroyed buildings and crops until the year 1760, when unbroken peace was established.

When Quebec was conquered by the British in 1759 the French Canadians refused to associate with their conquerors. For about a century, agriculture, hampered by isolation and lack of agricultural organization, made little progress. In 1850 it was still limited to the growing of cereals with-

out fertilizers and the production of hay.

The War of 1812 with the United States held agriculture in Ontario practically at a standstill for nearly four years. A great deal of the farm work during these years was done by the women and children.

The failure of the potato crop in 1845 and the loss of the wheat crop a few years later in the Maritime Provinces, the ravages of the wheat midge in 1829 in Quebec (then called Lower Canada) and in 1849 in Ontario (Upper Canada) caused hard times and led many young men raised on the farm to try their fortunes in other callings.

AGRICULTURAL ADVANCEMENT

The gradual increase of the population, the development of industry, commerce, and of the various means of transportation and communication, is a romantic story. In the early days the settler carried his wheat on his back or transported it by canoe to the nearest gristmill, which was sometimes many miles distant, and brought back meal for bread. He grew flax and used the fibre to make homemade coarse linen fabrics, supplemented by skins of wild animals and the hides of cattle. Later when sheep were introduced homespun garments became an important part of the clothing of the early settlers.

As the settlers increased the land became cleared, fences were erected, better houses were built to replace the old log cabins, and barns and stables were constructed. Sickles, flails and wooden ploughs were in time replaced by the self-binder, the threshing machine and iron and steel ploughs. Good live stock was imported, principally from the British Isles, for breeding purposes. The coming of railroads in the fifties and the improvement of highways meant better transportation

facilities for the carrying of farm products to the home markets in the growing towns and villages and provided a means of outlet for the delivery of surplus products to foreign markets. When the price of wheat rose from thirty cents to two dollars a bushel during the Crimean War many a farmer got his first real start towards independence.

The letters on agriculture written at Halifax by John Young (*Agricola*) in 1818, and the report of Prof. F. W. Johnston published in 1849 on the agricultural possibilities of New Brunswick gave a great impetus to crop production and stock raising in the Maritime Provinces. The growth of the dairy industry in Quebec and Ontario were factors in the advancement of agriculture in these provinces.

The organization of agricultural societies which began as early as 1789 and the formation of provincial departments or boards of agriculture, which in Quebec and Ontario (Lower and Upper Canada) occurred in 1850, were important steps.

The establishment of Provincial Agricultural Colleges at Guelph, Ontario, Truro, Nova Scotia, and Ste. Anne de la Pocatiere, Oka, and the MacDonald College in the province of Quebec also marked advances in the agriculture of Eastern Canada.

After Confederation the Dominion Department of Agriculture was formed and in 1886 the Dominion Experimental Farm system came into being. Later the Dominion Live Stock Branch, the Dominion Dairy and other branches were formed. By financial assistance from the federal and provincial governments, by education, by demonstration, and by individual and organized efforts farm practices have been improved, more definite markets established, and the agricultural industry has been raised to the important

place it now holds in the five provinces of Eastern Canada.

Today we have scores of agricultural societies and coöperative associations and institutions in all the provinces consisting of hundreds of thousands of members. The United Farmers of Ontario alone has about 60,000 members. A great number of agricultural fairs, including several hundred school fairs, are held each year. There are 50 agricultural representatives located in the various counties and districts in Ontario, 55 in Quebec and 7 in the Maritime Provinces. In the provinces are also found 7 agricultural colleges with their adjoining experimental farms and 12 Dominion Experimental Farms and Stations.

TOPOGRAPHY AND SOIL

The topography of the Maritime Provinces consists of contrasting upland and lowland areas. Except in Prince Edward Island where conditions are much more uniform than on the mainland, the larger areas of fertile soil are almost entirely confined to the lowland areas.

In the province of Quebec on both sides of the St. Lawrence slightly undulating in places, very deep and fertile alluvial soil extends in a continual terrace, very narrow in the east but spreading into a vast plain in the west. It was in this region that the first settlement was established and it is here that the most flourishing parishes and most prosperous farms and towns exist today. The great northern area called New Quebec, from the best information that can be secured, is considered almost entirely unfit for agricultural development.

Southern Ontario is generally of clay loam or sandy loam, undulating in surface, rich and retentive in soil with good natural drainage. The Great

Clay Belt of Northern Ontario, one of the finest expanses of alluvial soil in the world, is a comparatively level area of many million of acres. This country is still almost entirely a vast forest region.

CLIMATE

The climate of Eastern Canada for the most part is temperate with no great extremes except in the northern parts of Ontario and Quebec. The proximity of the Maritime Provinces and part of the province of Quebec to the Atlantic Ocean and the influence of the Great Lakes on Ontario have a modifying effect on the climate of these provinces. The season in the Maritime Provinces and the colder districts of Quebec, except in parts of the Annapolis Valley of Nova Scotia, is too short and too cool for the successful production of such crops as corn, peaches and pears. Corn, however, may be grown in almost any of the older sections of Ontario, and peaches and pears in the more southern parts of this province. The total yearly precipitation averaged for many years in different parts of Eastern Canada is between 31 and 42 inches. Snow covers the ground from three to four months of the year. The cold Canadian winter has earned a great deal of praise and is balanced by the abundance of sunshine, and a summer of splendid ripening power. The atmos-

phere almost the entire year is singularly exhilarating and bracing.

LATER DEVELOPMENT

The total population of Eastern Canada in 1921 was as follows: Ontario 2,933,662; Quebec 2,361,199; Nova Scotia 523,837; New Brunswick 387,876; and Prince Edward Island 88,615. In 1901 the rural population of Ontario was 57 per cent of the whole, while in 1921 it was only 42 per cent. Similar decreases have also occurred in all the other provinces. Mixed farming with some line of specialization such as dairying, beef raising or bacon production characterizes to a large extent the agriculture of Eastern Canada. The Annapolis Valley of Nova Scotia, and the Niagara district of Ontario are mostly devoted to fruit growing. The total estimated area under field crops was, in 1921, 20,658,000 acres.

In Ontario 85 per cent of all farm lands were operated by owners, 92.28 per cent in Quebec, 94.55 per cent in New Brunswick and more than 95 per cent in Nova Scotia and Prince Edward Island in 1911. The average size of farms and the average acreage of improved land per farm as given in the latest available statistics are contained in the table below.

The total estimated value given to live stock in 1920 was in Ontario \$332,194,000, Quebec \$206,814,000, New Brunswick \$31,188,000, Nova

	AVERAGE SIZE PER FARM IN ACRES	AVERAGE ACREAGE OF IMPROVED LAND PER FARM
Ontario.....	97.76	60.2
Quebec.....	97.77	51.11
New Brunswick.....	118.76	37.81
Nova Scotia.....	98.08	23.44
Prince Edward Island.....	83.68	53.53

PROVINCE	SPRING WHEAT		OATS		BARLEY	
	Acreage	Average Yield Per Acre	Acreage	Average Yield Per Acre	Acreage	Average Yield Per Acre
		Bus.		Bus.		Bus.
Prince Edward Island.....	34,106	16.	189,456	33.25	6,334	27.85
Nova Scotia.....	16,294	19.75	136,904	33.6	8,686	28.43
New Brunswick.....	28,028	17.	284,728	29.15	8,898	24.95
Quebec.....	180,616	16.2	2,366,810	26.4	191,673	22.55
Ontario Fall Wheat.....	621,420	22.4	3,094,958	37.1	462,176	30.3
Ontario Spring Wheat.....	153,904	18.5	.....	.....	.....	.....

PROVINCE	HAY		POTATOES		FODDER CORN	
	Acreage	Average Yield Per Acre	Acreage	Average Yield Per Acre	Acreage	Average Yield Per Acre
		Tons		Bus.		Tons
Prince Edward Island.....	255,394	1.55	36,921	168.	485	9.25
Nova Scotia.....	571,661	1.7	39,168	184.5	1,466	9.2
New Brunswick.....	694,497	1.43	74,875	168.	3,738	6.05
Quebec.....	4,426,671	1.5	222,084	162.5	89,546	7.85
Ontario Fall Wheat.....	3,551,655	1.55	164,096	115.2	438,343	9.3
Ontario Spring Wheat.....	.....	.....	.....	.....	.....	.....

Scotia \$34,648,000, and Prince Edward Island \$12,149,000.

The total acreage under six of the principal field crops grown in Eastern Canada for the year of 1921 and the average yield of these crops per acre is given herewith.

Other field crops grown in these provinces are peas, beans, buckwheat, rye, mixed grains, turnips and mangels. In Ontario and Quebec are also grown flaxseed, corn for husking, and alfalfa, and in the former province several thousand acres of sugar beets are grown every year.

Dairy products provide a large part of the income of farmers of Eastern Canada. In 1921 the total value of

the creamery butter produced was \$34,331,339, the factory cheese produced was valued at \$28,296,919, and about \$14,000,000 worth of condensed milk and milk powder was manufactured.

The value of fruit and vegetables grown in the eastern provinces reaches many millions, commercial apples alone in 1919 were valued at \$17,365,330.

Large annual returns are received from poultry raising. In 1921 there were over twenty-three million birds on the farms of Eastern Canada.

The bee-keeping industry, tobacco growing and the production of bacon, beef, mutton and wool also provide a

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goodly share of the financial returns from agricultural pursuits.

In 1880 all the wheat, except 3.2 per cent which was grown in Manitoba, and all the oats and barley were grown in the eastern provinces. In 1921, however, 93 per cent of the total wheat of Canada, 67 per cent of the oats and 74 per cent of the barley were grown in the provinces of Manitoba, Saskatchewan and Alberta.

The total value of field crops grown in Eastern Canada in 1870 was \$111,116,606. No crops at that time were grown in what are now the western provinces. In 1921, however, the value of field crops grown in Eastern Canada was \$818,731,750, while the western provinces produced field crops valued at \$636,511,900.

FUTURE OF AGRICULTURE

The future of agriculture in Eastern Canada is difficult to predict. Mixed farming, dairying and fruit growing are now firmly established.

Not more than one-half of the estimated area of over one hundred and ten million acres fit for agriculture in Eastern Canada is now occupied as farm lands. The great cost of clearing away the forests will prevent rapid improvement of this land for cultivation. Thousands of acres of cleared land in the Maritime Provinces now available for cultivation at a reasonable price and the great areas in the Cana-

dian West as yet untouched by the plough will no doubt become occupied before much of this forest covered land is cleared.

The network of railways in Eastern Canada, the improvement of highways now under way by the different provincial governments and the splendid location of seaports all facilitate the cheap and rapid transportation of agricultural products for delivery to the home and foreign markets.

The present government grading of farm products should result in the improvement of quality and the enlargement of markets and the efforts being put forth to reduce the cost of production on the farm should further stabilize the basic industry of agriculture.

When the traveller arrives at an Eastern Canada seaport he will see great quantities of wheat, flour, bacon, eggs, cheese, and butter awaiting export. As he travels inland he will find substantial farm homes, horses, cattle, sheep and swine representing most of the important breeds, meadows and fields of grain and fodder corn. These evidences of prosperity and the large number of farmers' automobiles and tractors, the up-to-date farm implements and the exceedingly hospitable people will undoubtedly give the traveller the impression that rural Eastern Canada is prosperous and a desirable place in which to live.

Western Agricultural Resources

By NORMAN P. LAMBERT

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DURING the past hundred years, the extent of the agricultural resources of middle-western Canada, generally known as the Prairie Provinces, has been the subject of much calculation of varying degrees of optimism and pessimism. Only comparatively recently have our governments—federal and provincial—sought to comprehend the truth with respect to the possibilities of western agriculture. For the greater part of the past century, views of the potential wealth of the prairie lands have swung from one extreme to another, influenced too often by selfish political or commercial interests.

EARLY AGRICULTURAL POSSIBILITIES

As early as 1809, at Fort Dunvegan on the Peace River, Daniel Harmon wrote in his diary: "We have cut our barley and I think it is the finest I ever saw;" and in the following year the same diary records that in the opinion of the writer "wheat, rye, barley, oats, peas, etc., could grow well on the plains around us." About fifty years later, when that pompous little Governor of the Hudson's Bay Company, Sir George Simpson, gave evidence before a special committee of the British House of Commons, upon the character and future possibilities of the Canadian Northwest, he intimated that all the territory west of the Red River settlement was fit for little else than pasturage for buffalo herds, and said that in the Red River settlement, agricultural operations had not been encouraging. It was not until after Confederation and the building of the Canadian

Pacific Railway, that the territory now contained in the provinces of Manitoba, Saskatchewan and Alberta, became known as a great agricultural country. Almost at one bound, the Canadian West passed from a stage of pathless prairie, inhabited by Indians and buffalo, to an active farming community, with its homesteads, roads and fences. This transition was accelerated by the energetic efforts of the speculator in farm-lands and town-lots; and in the hectic atmosphere of the "boom" days, the agricultural resources of the three middle-western provinces were pictured in lurid and extravagant colors.

Shortly after the election of the Laurier Government to federal office in 1896, an aggressive immigration policy was adopted, and free homesteads were offered promiscuously throughout the world, with the object of inducing settlement on the plains of Western Canada. The result of this policy was that very large areas which formerly had been classified as rangeland and divided into cattle and horse ranches, were broken up into 160-acre lots, regardless of the suitability of such areas to smaller farming operations. Those were the days when reference to the potential agricultural wealth of the middle west was made in superlative terms.

SCIENTIFIC SURVEYS BEGUN

Since that time, and particularly since the World War, the agricultural departments of the three Prairie Provinces have realized that the people within their respective fields of ad-

ministration, as well as those in other parts of the Dominion, have been living under the mistaken impression that the richness and fertility of the prairie soil were practically unlimited. Consequently, within the past three or four years, in the more sober light of after-war conditions, we have seen greater progress made towards a realization of the actual facts of our western agricultural resources, than during all the preceding years. Until three years ago, a detailed and thoroughly scientific survey of western soils had never been undertaken. One or two reconnaissance surveys which made only a rapid and superficial examination of the land had been undertaken, but not until 1919 did we have a beginning made at the important task of investigating closely the extent, quality and capacity of the arable lands of Western Canada. Each of the Prairie Provinces already has had survey boards report upon soil conditions in its southerly districts, and a complete examination of the soils in Manitoba, Saskatchewan and Alberta, where farming operations have met with continued adversity, is now in progress.

TOPOGRAPHY OF PRAIRIE PROVINCES

Roughly speaking, the Prairie Provinces comprise a rectangular area lying between the Rocky Mountains on the west and the barren lands lying north of Lake Superior on the east, and between the 49th parallel of latitude on the south and the 60th parallel of latitude on the north. In round numbers, the proportions of this rectangle are some 800 miles east and west by some 750 miles south to north. Beyond the 60th parallel of latitude is the great Hinterland of the North American continent, extending over bush land and mineral area to the edge of the Arctic circle. The actual land area of Manitoba, Saskatchewan and

Alberta, surveyed and unsurveyed amounts to 464 million acres, of which something over 200 million acres can be described as land having cultivation possibilities. From Manitoba the plains rise in three sweeping steppes to the foothills of the Rocky Mountains. The first and lowest is the Red River Valley in Manitoba, which has an altitude of some 800 feet above sea level. The northern part of this first plain is occupied by the Winnipeg group of lakes, and south of Lake Winnipeg it rises from the eastern boundary of the province to the ridges of the Pembina, Riding and Duck Mountains and the Porcupine Hills. This series of hills extending northward from the international boundary line to a position west of Lake Winnipeg constitutes the westerly shore of the prehistoric Lake Agassiz, which is said to have been drained in a southerly direction, leaving deposits of clay and silt, which are now overlaid by several feet of black, vegetable loam.

The second steppe reaches from the mountain ridges just enumerated, westward into Saskatchewan as far as the Missouri Coteau, known locally as the Dirt Hills, which extend from the international boundary west of the town of Estevan in a northwesterly direction to the elbow of the South Saskatchewan River. This range of hills has an average altitude of about 2,400 feet above sea level and is believed to have been the boundary of another ancient body of water, known geologically as Lake Saskatchewan, and covering a large proportion of what is now the easterly and northerly sections of the province of Saskatchewan. The second steppe, thus described, includes southwestern Manitoba.

The third steppe extends from the westerly part of Saskatchewan to the Rocky Mountains, developing, as it reaches Alberta, into a high plateau

with an altitude of from 2,500 to 3,500 feet above sea level. All the way across the 800 miles of territory between the easterly boundary of Manitoba and the westerly boundary of Alberta there is a wide variety of soils and of geographical conditions. The climate, also, is subject to marked variations as between those parts of the territory lying east and west of a line which may be drawn north and south through the center of Saskatchewan.

TYPES OF SOIL IN MANITOBA

In Manitoba, as many as eight different types of soil have been identified. The first type is that of the Red River Valley, which exceeds in natural fertility any other portion of the prairie country. It has been estimated that in an acre of this soil at a depth of one foot there is 20,000 to 25,000 pounds of nitrogen; 1.033 per cent of potash; .29 per cent of phosphoric acid, and an equally large proportion of lime. In organic matter, the Red River Valley is particularly rich, exceeding in this respect by 25 per cent water free soil. These figures represent a natural fertility far in excess of the ordinary quality of virgin soil, which, for example, contains in nitrogen, an average of 3,500 to 10,000 pounds.

Soils Nos. 2 and 3 are found in the Portage la Prairie district, about 65 miles west of Winnipeg. No. 2 is a virgin prairie, uncropped and unmanured, while No. 3 is the same soil after 35 years of grain growing interspersed with summer-fallow. The virgin soil of this locality is considerably darker and contains more root fibre than the No. 3 which has been subjected to constant cultivation. No. 2 is not quite equal to No. 1 from the Red River Valley.

Soils Nos. 4 and 5 are found in the Brandon district, 130 miles west of

Winnipeg. They are almost identical, being a mellow black loam and somewhat sandy, but exceedingly fertile in years when they have received an adequate supply of moisture.

Soil No. 6 is located west of Lake Dauphin and northwest of Lake Manitoba, where trees and shrubs abound. It is a sandy loam, rich in organic matter, but with a large proportion of clay which makes it bake very hard when dried by the sun and wind. It has shown good fertility, having a higher percentage of organic matter, however, than of nitrogen and potash. In the Valley River section of the Dauphin district, soils Nos. 7 and 8 are found, and these are of poorer fertility than any of the soils previously enumerated.

TYPES OF SOIL IN SASKATCHEWAN

In Saskatchewan, according to Professor Shutt of the Central Experimental Farm at Ottawa, there are eleven types of soils. Soil No. 1 is found around Moosomin and is described as a rich, black loam of high fertility and not quite equal in chemical analysis to the soil found in the Red River Valley. This soil in the Moosomin district is to be found generally over the southeastern part of the second prairie steppe which has already been described. At Tisdale, 160 miles north of the district around Indian Head and Moosomin, soil No. 2 is found and compares with that of the Dauphin district of Manitoba, being covered with scrub, and unlike the prairie. It is a grayish, black loam of a clayey nature, whose notable contents are potash and lime. At Saltcoats and Yorkton in the northeasterly part of Saskatchewan, soils Nos. 3 and 4 are described as a black, sandy loam of true prairie type, rich in vegetable matter and nitrogen, with a goodly percentage of phosphoric acid and

potash. In this district, there is a greater growth of shrubbery and trees than is usually found on the prairies farther south. It is a district which is well known for its excellent crops of oats.

Soils Nos. 5 and 6 represent an area at Wolseley which has been under crop for 15 years, without manure. They are described as black, sandy loams, rich in vegetable matter. At the Dominion Experimental Farm at Indian Head a variety of soils from No. 7 to 10 is to be found. These are all generally described as being a heavy, clay loam, with varying degrees of plant constituents. One of these soils is shown after a cultivation of 22 years without manure, to have been depleted of 2,186 pounds of nitrogen per acre from a depth of eight inches.

Soil No. 11 is in the district of the Vermillion Hills, 130 miles west of Indian Head, and is a dark brown, sandy loam, equal in organic matter and nitrogen to soils Nos. 7 to 10, but lower in phosphorus, lime and potash.

SOIL FOUND IN ALBERTA

As for Alberta, there does not seem to be available any extensive data with regard to the classification of soils. Over the prairie country which comprises the southern part of that province, the soil is described as a rich, chocolate loam, varying in depth from four to eight inches, while in the park country to the north there is a heavier black loam from six inches to two feet deep, being rich in nitrogen and phosphorous acid. Alberta, however, is very rich in natural vegetation. There are ninety-six different varieties of grasses, of which, forty-six make good hay. There are over ninety varieties of rushes and sedges, many of which make good hay, and all of them good pasturage.

CLIMATIC CONDITIONS

The chief climatic factors in middle-western Canada so far as agriculture is concerned, are drouth and frost. Extremes in the matter of precipitation and temperature, which frequently occur on the prairies, are vital factors in the life of the western farmer. In Manitoba, freedom from frost varies from 70 days in the northerly and westerly districts to 110 days in the southern part of the Red River Valley. The average yearly rainfall in Manitoba ranges from 16 inches in the western part of the province to over 21 inches in the eastern part. This represents more rain than falls in any other part of Canada or the American prairies, west of the 100th Meridian, but it is much less than that enjoyed east of that Meridian. The compensating feature in connection with this seeming lack of moisture in the western provinces throughout the year, is that the rain falls when it is most needed, namely, in the growing months of May, June, July and August. In the Red River Valley in Manitoba, the rainfall in these four months is about equal to that of Ontario during the same period.

In Saskatchewan, the average precipitation is something less than 20 inches annually, the northeastern sections of the province receiving a more generous supply of moisture than the more southerly and westerly districts. Despite the evil reputation of the western country for wintry weather, the average temperature for 10 years in the month of January in Saskatchewan was 2.9 degrees above zero, and for the month of June 57 degrees above zero. The westerly half of Saskatchewan feels the modifying influence of the Chinook winds, which find their way through the Rocky Mountains and as far east as Moose Jaw and Saskatoon. It is in Alberta, however, where the

Chinook winds have the greatest effect, and there, over the greater part of the province, the period of winter is broken up and greatly moderated by the tempering influence of the Chinook winds. The average rainfall for the province of Alberta is about 16 inches, varying from 9 inches in the Medicine Hat district to 17 inches in the Edmonton district.

METHODS OF LAND CULTIVATION

Methods of land cultivation employed on the western prairies have been mainly of three kinds. The first two methods have to do with the breaking of the virgin prairie. First, the land is plowed to a depth of three or more inches and left until the following spring and then worked with a disc harrow in preparation for seed, being cultivated again in the late fall. This is known as the "deep-breaking" method, and the popular first crop for areas cultivated in this way has been flax. The second, and more generally adopted method has been as follows: Plowing before July, a furrow 12 to 14 inches wide, and very shallow. Later, when the sod has decayed, to plow three inches deeper and perform what is known as "back-setting." This process of back-setting should be followed up by an operation with the disc harrow. Rolling and packing the soil after the first breaking hastens decomposition of the soil, and the back-setting is made possible at a much earlier date in the season. The third process of cultivation in the West, of course, is summer-fallowing, which consists in leaving a large portion of the cultivated areas idle each year. This is done primarily to destroy the weeds, and help preserve the moisture for the seed-bed of the following year.

In Alberta, a great deal of attention is now being given to irrigation, as a means of overcoming the uncertainty

of grain production, due to drouth. There are now in the province of Alberta, nineteen different irrigation projects, comprising over 5,600,000 acres of land. Of this acreage, over a half is represented in the irrigation projects of the Canadian Pacific Railway Company, immediately east of Calgary. Where irrigation is being adopted, however, the character of the farming operations is changing from grain-growing to the live-stock industry.

CROP AREAS

Of the 200,000,000 acres of land available for cultivation which is said to lie within the three Prairie Provinces, only a very small percentage is under crop. In the province of Manitoba, the total agricultural acreage amounts to something over 20,000,000 acres, of which 13½ millions is actually occupied by farmers, and out of this area now divided into farms, slightly more than 7,000,000 acres are under cultivation.

In Saskatchewan, the southern half of the province is divided into nine crop districts, which represent roughly, 85,000,000 acres. Of that number of acres, there are probably 40,000,000 acres divided into farms with an average size of 320 acres, but the actual acreage devoted to crops this year (1922) is less than 22,000,000 acres. Likewise in Alberta, whose possible cultivated area extends much farther northward than that of the other two Prairie Provinces, it is estimated there is roughly 100 million acres of arable land, of which today less than eight millions are bearing crops. Thus in the three Prairie Provinces only 17 to 18 per cent of the total area having cultivation possibilities has been put under crop.

INCREASE IN PRODUCTION

The extent to which production has already increased in this country, however, may be appreciated when it is

shown that in 1900, the middle-western territory produced 17,000,000 bushels of wheat from 1,870,000 acres, and that 22 years later, from 21,500,000 acres we have an estimated wheat crop of 385,000,000 bushels. What is recorded here with respect to wheat is true, also, of the other crops, such as oats, barley, rye, and flax. Taking all grains into consideration, there was an area under crop this year (1922) in the middle west, amounting to 36 million acres, which yielded an estimated production of 812 million bushels. The province of Saskatchewan, in which over 72 per cent of the population reside on the land, is responsible for considerably more than 50 per cent of this total production, and has more acres under cultivation to grain than Manitoba and Alberta combined.

As indicative of the possibilities of the future, a word should be said about the northerly districts of Alberta, bordering the Peace River. Wheat has been grown for more than 25 years at Fort Liard, 135 miles west of the northwest corner of that province, and also, at Fort Simpson, which is 100 miles north of the 60th parallel of latitude. As early as 1875 wheat was sent from Fort Chipewyan to the Centennial Exposition at Philadelphia in 1876 and was awarded first prize. In 1893, wheat from Peace River Crossing won first prize at the Chicago World's Fair. At Fort Vermillion there are now two stone flour mills and a 25-barrel roller mill, which grind annually from 30,000 to 50,000 bushels of wheat grown in the immediate vicinity, and used for supplying trading posts farther north.

THE LIVE-STOCK INDUSTRY

While the western provinces have been known principally for their production of grain, the live-stock industry has been quietly developing

into large proportions. In the year 1891 the live-stock industry of the West was represented largely in the province of Alberta and southwestern Saskatchewan, where the Dominion Government had 1,801,209 acres of grazing lands under lease to over 100 lessees, six of these controlling over 100,000 acres each. That was the day of the big ranch, and it is recorded that in 1892 on ranches there were 20,579 horses, 139,000 cattle and 80,000 sheep. It is interesting to note that in the years 1918 and 1919, which represent the high peak in the live-stock industry in Western Canada, the numbers of the different kinds of live-stock had increased in a remarkable manner. In Alberta, there were 800,000 horses, 1,584,000 cattle, 364,000 sheep, 446,000 swine and 4,426,000 poultry. In Saskatchewan, stocks have increased in 20 years from 83,000 to 1,000,000 horses; from 117,000 to 1,380,000 cattle; from 73,000 to 147,000 sheep; from 27,000 to 432,000 swine and from zero to 8,500,000 poultry. In Manitoba in 1889 there were 148,200 cattle which had increased to 192,500 by 1895. Twenty-five years later in Manitoba there were 800,000 cattle, 400,000 horses, 167,000 sheep, 250,000 hogs and 3,000,000 poultry. Today, with adverse economic influences affecting production in Western Canada, the live-stock industry looms up as the hope of the future.

DEPLETION OF SOIL FERTILITY IN OVERWORKED SECTIONS

While only a small proportion of the number of available acres for cultivation in the three western provinces has been occupied and used for farming purposes, it is of interest and importance to note that that part of the settled area bordering on the international boundary line and generally known as the southern districts of

Manitoba, Saskatchewan and Alberta, have reached the point where the law of diminishing returns distinctly applies to present farming operations. The southerly districts of the prairies were the first to be opened for settlement, they being the most accessible to the earliest lines of railway which were built across the continent. The first tide of immigration from the East flowed over the southern portions of these provinces and produced the first crops of grain that were grown in Western Canada. The effect of constant grain cropping over a period ranging from 25 to 35 years has been all too indelibly written upon land which was once as fertile and productive as any part of the prairies. Each of the western provinces has now its problem in planning to reclaim these southern areas, whose fertility has been depleted.

In the Progress Report of the Agricultural Survey Committee appointed by the government of Manitoba, Principal John Bracken, who has since become the Prime Minister of the province, made the following observations respecting the soil conditions where grain cropping has been carried on for a generation:

The effect of a generation of cropping to wheat has been to reduce the nitrogen in the surface 7 inches of soil, by 20 per cent to 30 per cent, the phosphorous content by an equal amount, and organic matter by 20 to 50 tons per acre. In a generation, more than a quarter of the potential wealth of the surface soil has disappeared.

In this same report, Mr. Bracken states that in 30 years, the average wheat yield in the province has dropped from 19 bushels to 15 bushels per acre.

CHANGE IN AGRICULTURAL SYSTEM

In Saskatchewan, the Royal Commission of Inquiry into Farming Con-

ditions found that the system of agriculture in the southwestern and central-western portions of that province, would have to be radically changed. The practice of summer-fallowing year after year in dry and windy districts, had resulted not only in the impoverishment of the soil, but in pulverising it to such a degree of fineness, that it was impossible for the farmer to engage in proper tillage. The Saskatchewan Commission, in dealing with the management of drifting soils, reports that the farmers' only recourse is to increase the resisting power of the soil and to protect the soil surface from wind. The methods to be used in accomplishing these two objects are to increase the moisture content of the soil and to increase its content of organic matter and by modifying the structure of the soil. Explicitly does the Saskatchewan Commission make the following recommendation:

Judging by the experiments of settlers as well as by the experience of farmers and the reports of experimental stations in areas having similar conditions elsewhere, the commissioners believe that the following crops may prove of value to the southwest area: winter rye, spring rye, durum wheat, corn, sunflower, potatoes, millet, oats, barley, alfalfa, sweet clover, brome grass as well as wheat grass.

Further in its report, in referring to what other states and provinces were doing to control soil-drifting in arid areas, the Saskatchewan Commission states that winter rye is becoming increasingly popular in Alberta, and that sweet clover is being used to some extent in rotations, although brome grass is better as a soil binder than the legumes or other grasses commonly grown. In Manitoba, it was observed that many farmers were using manure or straw to prevent soil-drifting, or check it when it begins. The acreage

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seeded to grass is also being extended in that province.

Another contribution to the solution of western agricultural problems has been the Report of the Survey Board for Southern Alberta addressed to the government of that province. It has to deal with a very serious condition which has developed as a result of a series of very dry years. Irrigation appears to be the popular recommendation for overcoming the handicap of excessive drouth under which so many of the farmers of Southern Alberta have been struggling.

A perusal of these special reports on

the southern areas of each of the western provinces shows that the agricultural outlook in Western Canada is not wholly without its trying problems. But withal, these three provinces have been blessed with sufficient agricultural resources to support a population of ten millions of people instead of two millions, provided that other factors such as marketing, transportation and financial facilities are favorable. Nature has bestowed with lavish hand, agricultural wealth in the land of Western Canada, and it only remains for man to bring it into full fruition.

Agricultural Research in Canada

Its Origin and Development

By E. S. HOPKINS, B.S.A., M.S.

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IN Canada, as in other countries, research in agriculture is comparatively modern. While the practice of agriculture dates back to the most remote times, its scientific study commenced less than one hundred years ago. Not until the sciences of chemistry, bacteriology and botany had made some development, did the science of agriculture become possible, for the science of agriculture is but the application of the principles of the pure sciences to the field of agriculture.

To show more definitely how recent has been the development of research in agriculture, it is only necessary to mention the date when some of the more important discoveries were made. Liebig in Germany showed the value of the mineral constituents in the nutrition of plants in 1840. Lawes and Gilbert, in England, showed the value of rotations and treated phosphate rock about 1850. These discoveries, though constituting some of the more essential features of soil fertility and enabling a much more productive agriculture, were unknown to the farmers of past centuries. In the domain of live stock, a similarly backward condition prevailed; the ignorance seems, in the light of present knowledge, almost incredible. Yet, Pasteur, in France, less than fifty years ago, was the first to prove that spontaneous generation—the supposed generation of living things from non-living matter—was untenable. This distinguished scientist, by his work with anthrax and

with rabies in 1885, was the first to introduce the control of disease by means of antitoxins.

EARLY BEGINNINGS

In 1843 the first agricultural experiment station in the world was started at Rothamstead, England. In Canada, the first agricultural experiment station was started at the Ontario Agricultural College, Guelph, in 1874, although, at an earlier date a school of agriculture was started at Ste. Anne de la Pocatiere, Quebec, in 1859. The Dominion Experimental Farms were established in 1886, a system which included in addition to the Central Farm at Ottawa, four branch farms in various parts of Canada. It is rather interesting to note, in the annals of Canadian agriculture, that the founding of both the Ontario Agricultural College and the Dominion Experimental Farm System was accomplished by Sir John Carling when he was Minister of Agriculture, first in the government of the province of Ontario and later in that of the Federal Parliament.

The early work of these agricultural experimental farms was beset with great difficulties. The field was new, the general public was suspicious if not hostile, there was little existing work with which to guide the hand of the investigators and, almost above all other difficulties, their support, both financially and morally, was very meager. These agricultural experimental farms, unlike endowed institutions, depended upon the Government

for financial support and the fact that they, as well as many additional farms, have developed, is proof not only of the good work of the early men who manned these places but of the great need in the country for experimental work in agriculture.

GROWTH

In later years considerable development in agricultural institutions has taken place. From its four original branch farms, the Dominion Experimental Farm System has increased to a total of twenty-one branch farms, seven substations, two tobacco stations and eighty-six illustration fields in various regions throughout Canada. Other branches of the Federal Department have undertaken investigations in connection with various phases of work under their charge. The Ontario Agricultural College has increased from an initial personnel of seven members, under the interesting titles of principal, rector, farm foreman, stockman, gardener, engineer and foreman carpenter to a faculty of approximately sixty-two members, including the various departments of pure and agricultural sciences. A small school of agriculture was opened at Truro, Nova Scotia, in 1888; a college of agriculture at Oka, Quebec, in 1890; colleges of agriculture at Winnipeg in 1903, at Ste. Anne de Bellevue in 1907 and at Saskatoon in 1909; schools of agriculture in Alberta in 1913 and a college of agriculture at Vancouver in 1915. While it would be erroneous to infer that agricultural research (in any sense of the real meaning of the word research) has commenced with the very founding of these agricultural colleges, nevertheless, it conveys an approximate if not absolutely correct idea of the time when research started in these institutions.

THE EXPERIMENTAL FARMS BRANCH

The principal agency of agricultural research in the Dominion Department of Agriculture is the Experimental Farms Branch. This system of Experimental Farms represented as it is with branch farms in all the main farming regions of Canada, and with substations in the, as yet undeveloped, territories, undertakes experiments in what might be described as the production phases of agriculture. At the central Experimental Farm at Ottawa are located the chiefs of some fourteen separate divisions. The planning of experimental work and the interpretation of data are undertaken by the chiefs of these divisions in consultation with the superintendent of each farm and with the director of the system. Other branches of the Dominion Department of Agriculture undertake research often in connection with the administration of certain acts of Parliament. The Health of Animals Branch, through its pathological division, conducts research work on diseases of live stock. The Dairy and Cold Storage Branch operates a factory at which experiments are conducted on the manufacture of butter and cheese. The Entomological Branch undertakes investigations on the control of insect pests.

Under the jurisdiction of the various provincial governments, agricultural research is conducted at the colleges and schools of agriculture. While the main duty of these institutions is to give instruction to students, and in some instances to undertake extension work in addition, it is being clearly recognized that some research activities are indispensable if competent instruction is to be given. During the early stages in the development of agricultural colleges, the professors were called upon to give a very large pro-

portion of their time to teaching and extension; in more recent years, however, a much improved system has been introduced which permits those men who are to engage in research being largely freed from too long hours at teaching or extension.

ACHIEVEMENTS OF RESEARCH

Research in agriculture must produce practical results and, what is more difficult, it must produce these results without delay. Many other lines of research, on the other hand, are not pressed for immediate returns and may continue projects for years without criticism. In agriculture, however, the public demand without delay information which will be of practical monetary value to the farmer. Fortunately, the achievements of agricultural research have amply justified all the expense which it has incurred and have answered all criticism of its value.

Plant improvement, either by hybridization, selection or introduction, has very greatly increased the agricultural wealth of Canada. Wheat is the most important individual crop in Canada; in 1921, out of a total of 60,000,000 acres of field crops, there were over 22,000,000 acres in wheat. Agricultural research, through skilful hybridization work on the Dominion Experimental Farms, has introduced a variety of wheat, Marquis, which has been so superior to other kinds that on the Prairie Provinces, where 93 per cent of all the wheat in Canada is grown, over one-half is of the Marquis variety. Ruby wheat, another variety originated by the Dominion Experimental Farms, has been found very successful in districts where, on account of the danger of frost, Marquis cannot be grown successfully. The Ruby variety, although yielding somewhat less than the Marquis, matures

about ten days earlier, a factor of vital importance in regions where frost is a menace. Huron wheat, a further variety originated by the same system, gives the largest yields of any wheat in Eastern Canada.

Oats, is the next most important crop after wheat and the varieties of this crop most commonly grown in Canada have been greatly improved by selection. The Banner variety of oats, which is probably the most extensively grown variety in Canada, has been much improved by selection work at the Dominion Experimental Farms. The O. A. C. No. 72 variety, which is also widely grown, was developed by the Ontario Agricultural College. With barley, the Ontario Agricultural College, by its introduction of O. A. C. No. 21, has produced a variety which is now the most extensively grown in Canada.

With grasses, agricultural research has not contributed quite such outstanding results as it has with grains. Timothy, Red Clover, Alsike and Alfalfa have been known for many years, although with the latter crop, agricultural research has indicated what strains have been most winter hardy, a quality the lack of which has caused serious losses to farmers throughout Canada. On the Prairie Provinces, agricultural research has shown that Timothy, Red and Alsike Clover could not be grown successfully in such a dry climate. Research has introduced, by domestications from indigenous plants, the Western Rye grass which is now the most extensively grown hay crop in the Prairie Provinces.

VALUE OF RESEARCH

Field husbandry practices have been greatly improved by research—an improvement which has added millions of dollars to the agricultural wealth of this country. Definite experiments

have shown enormous increases in yield following early seeding of grain. In an experiment, conducted over a period of ten years at Ottawa, it was found that the best results were secured one week after drained land was ready to seed—which time, however, on many undrained soils, might correspond to a period when the land could first be seeded. By delaying seeding one week beyond this period a loss in yield has been entailed with wheat of 30 per cent, with barley of 24 per cent, and with oats of 15 per cent. By delaying longer, further decreases in yield are experienced until, by delaying four weeks, a loss was suffered with wheat of 58 per cent and with barley and oats, 46 per cent. This experimental work, which was confirmed at the Ontario Agricultural College, showed that with no additional expense, greatly increased yields could be secured by early seeding alone.

On the Prairie Provinces, soil moisture is the greatest single factor limiting the yields of crops. Experimental work conducted in the pioneer stages of the development of this country showed the great value of the summer fallow in conserving moisture and in controlling weeds. Carefully conducted experiments have shown the most successful methods of handling summer fallow and stubble land. In Eastern Canada fall ploughing gives the best yields of grain, but experimental work soon showed that spring ploughing on the prairie gives better results.

CONTRIBUTION OF AGRICULTURAL RESEARCH TO LIVE STOCK

With live stock, agricultural research has also contributed material improvement. The improvement of stock by the use of pure-bred sires has been a very practical means of increasing the returns from the farm. Grad-

ing-up experiments have secured definite figures showing what could be secured with beef and dairy breeds.

Housing conditions for stock have been changed as a result of experimental work. It was formerly thought that hogs had to be housed in large, close-fitting, expensive buildings, but repeated experimental work has shown that very small, inexpensive shelters give results not only as good but even better than such expensive buildings. In many parts of the Prairie Provinces where the winter climate is severe, it was formerly thought absolutely necessary to house beef cattle in barns, but feeding experiments have shown that outdoor feeding in inexpensive corrals give just as good results.

The feeding of live stock has been greatly changed by research. Indeed, agricultural research on the feeding of animals preceded research on human nutrition. When science gave results with the lower animals it was tried on man. The value of rations arranged to provide maintenance or give increases in flesh or milk was an important step in the progress of nutrition. The selection, in various parts of Canada, of such foods as would give the best results has been the work of many experiments.

The diseases of live stock have been considerably reduced by research. Healthful surroundings, fresh air and exercise, on the one hand, have been shown repeatedly to be an important measure in disease prevention, while, on the other hand, more knowledge of remedies and vaccines have kept diseases under control. The extensive use by farmers of black-leg vaccines must be largely ascribed to the early work of the Health of Animals Branch of the Dominion Department of Agriculture which in 1921, the last year of distribution to stockmen before leaving the manufacture of this material to

private concerns, distributed 32,500 doses in Canada. As these doses cost five cents each, it is evident that there was a large demand from the Department of Agriculture.

RESEARCH IN OTHER SUBJECTS

The foregoing statements have indicated a few of the more noteworthy achievements in field crop and live stock subjects. They do not embrace, by any means, all the important successes in these lines and they omit entirely the results of research in other subjects. In the field of chemistry, research has given valuable aid on the maintenance of soil fertility, the composition of foods, and the content and value of commercial fertilizer. In entomology valuable information has been gathered on the control of injurious insects. In botany research has shown how to treat grain for smut and potatoes for scab. In horticulture valuable work has been done in introducing varieties of fruits and vegetables suitable to various parts of Canada while the fruit industry has been practically saved by scientific methods of spraying for injurious insects and scale diseases. Experiments in poultry and bees have likewise aided their respective branches.

This article deals only with the achievements of agricultural research in Canada; it does not refer to achievements made elsewhere. Fortunately, however, the results of successful research, no matter where undertaken, may be utilized in Canada if they are applicable. The discovery of the Babcock Milk Tester, for example, at the University of Wisconsin, has had widespread use and value throughout the world. It is quite as much the duty of research staffs to study, and make known where advisable, the results of research work undertaken in foreign countries, as it is to initiate new work.

HOW INFORMATION IS DISSEMINATED

The results of agricultural research are given to the public principally by publication. All intelligent people read and those interested in agriculture read agricultural material. This material is published in the press and in reports, bulletins and pamphlets. The Dominion Department of Agriculture distributed in 1921 a total of 100 separate publications amounting to approximately 2,250,000 separate copies, while the various provincial departments also made large distributions. Many letters requesting information are received by departments of agriculture and agricultural colleges, the Dominion Experimental Farm System receiving, in 1915, the last year when such figures were published, a total of 174,298 letters. Colleges and schools of agriculture impart the results of research to their students who use the information on their own or their parents' farms and indirectly, by example, cause its dissemination throughout the country. Exhibits are arranged at the more important agricultural fairs throughout Canada giving, in a brief but forceful manner, some practical findings of science. Agricultural representatives give to the public often by personal visit, the results of the more important lines of research. In addition to these direct methods of making known the results of agricultural research, the public is brought in contact with it through acts of Parliament. The Dominion Department of Agriculture administers no less than eleven acts of Parliament the provisions of which have been largely based on investigational work.

THE FUTURE

Canada is a great agricultural country, 50.2 per cent of its population living in the country. It possesses large areas of uncultivated land whose

development would add enormous wealth to the country—both urban and rural. And while much of this land is situated in climates which are well known to be favorable to the production of crops and animals, there are extensive regions of whose soil and climate no one can yet say. It requires research to discover how such land can be handled successfully.

Moreover, the basis of success in

agriculture is the success of the individual farmer. The farm must pay. But to make the farm pay many problems must be solved which the farmer alone cannot solve. Scientific study is necessary and this study should include not merely our present problems but what may become problems sometime in the future, so that troubles may be avoided rather than corrected after they have happened.

The Fisheries of Canada

By EDWARD E. PRINCE, LL.D., D.Sc., F.R.S.C.

Dominion Commissioner of Fisheries, Ottawa

FROM very early times the fisheries of Canada have been famous. Their importance is due to three main conditions.

1. The waters, inland and marine, being northerly, are pure and cold, and prolific in fish-life.
2. The species most abundantly occurring are precisely those which are most in request in the markets of the world, viz., the Gadidæ or cod family, and the Salmonidæ or salmon, trout, and whitefish family.
3. The deep-sea and inshore fishing grounds are of vast extent, and the fresh-water system of inland lakes, rivers, and streams almost unparalleled.

Few countries possess waters which afford such scope for gigantic commercial fishery enterprises; and the numerous picturesque lakes and noble angling rivers in the various provinces have won for the Dominion her title to be called "the Paradise of the Sportsman."

EXTENT OF FISHING GROUNDS

Off the Atlantic coast of Canada are the famous "Grand Banks" of the North Atlantic extending from Labrador to the Gulf of Maine, nearly one thousand miles, north to south, and from a hundred and fifty to three hundred miles wide, and embracing an area greater than Italy; the Gulf of St. Lawrence, not less productive of fish, having an extent of eighty thousand square miles; the Bay of Fundy, over four thousand square miles; while

the Pacific fishing grounds, off the west coast, are variously estimated at from one hundred thousand to one hundred and fifty thousand square miles. If the sea-fishing areas are on this vast scale, the inland waters are also of enormous extent, and including the Canadian portion of the Great Lakes, and the countless rivers and lakes occurring from east to west, and north to the Arctic seaboard, they must approach a total of about two hundred thousand square miles, of which the Great Lakes and Georgian Bay constitute one-fifth, or about forty-two thousand square miles. More than a hundred and twenty fine Canadian rivers are over two hundred miles in length, some like the Fraser River exceeding seven hundred miles, others, like the Peace and Churchill Rivers, being a thousand miles long; but the giant Mackenzie is over two thousand five hundred miles in length. Amongst the most famous salmon rivers in the world, and taking first place in the annals of sport, are such noted streams as the Restigouche, Miramichi, St. John, Moisie, Godbout, and Romaine, though at least fifty other eastern rivers are second only in repute.

ANNUAL CATCHES OF FISH

The total annual take of fish, fresh-water and marine, amounts to about four hundred and fifty thousand tons, and embraces at least fifty comestible species. The weight, respectively, of ten of the most important kinds is as follows, the figures being for the year 1920 and the year 1921:

Cod...
Herring
Salmon
Haddock
Halibut
Hake (C)
Lobster
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Trout.

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	1920	1921
Cod.....	99,135 tons	106,684 tons
Herring.....	103,636 "	83,684 "
Salmon.....	64,236 "	43,906 "
Haddock.....	22,087 "	13,461 "
Halibut.....	13,186 "	17,873 "
Hake (and pollock).....	15,851 "	11,840 "
Lobster.....	19,999 "	19,681 "
Lake whitefish.....	9,081 "	9,204 "
Mackerel.....	7,117 "	7,277 "
Trout.....	2,788 "	3,067 "

The value of the fisheries has progressed during the last fifty years as is indicated by the following figures (each tenth year being selected) from 1872 to 1912:

1872.....	\$10,780,000
1882.....	16,825,000
1892.....	18,941,000
1902.....	21,960,000
1912.....	34,670,000

But the last decade (excepting for the abnormal increase in the returns during the Great War) has shown unmistakable stagnation or even actual decline. The official figures for the ten years 1912 to 1921 inclusive are as follows:

1913.....	\$33,389,464
1914.....	33,207,748
1915.....	31,264,631
1916.....	35,860,708
1917.....	52,312,044
1918.....	60,250,544
1919.....	56,508,479
1920.....	49,241,339
1921.....	34,931,935
1922.....	32,846,950

Some fisheries, like the lobster fishery, have in thirty years nearly trebled in value, yielding in 1890 \$1,868,492, and in 1920 \$3,067,983. The salmon industry has also shown wonderful expansion. In 1882 it was valued at \$1,795,732, and in 1892 it rose to

\$2,242,846, and the last returns (1921) showed a value of no less than \$5,042,492, but in 1916 the value, owing to the unusual war conditions, was recorded at nearly \$12,000,000, the canned salmon industry being mainly responsible for the remarkable increase in the total returns. The cod fishery, one of the oldest staple fish enterprises of Canada, has not developed in the same degree, but has remained non-progressive, for, whereas in 1882 its value was stated to be \$3,778,901, and in 1892 \$4,050,468, it reached a value in 1902 of only \$4,028,788, and in 1921 had actually fallen to \$3,693,201. Nor has the progress of the herring fisheries, so supremely important and valuable in Britain and Norway, been more favorable, for in 1882 the official reports give the value as \$2,130,000, in 1902 as \$1,723,098, and in 1921 as only \$1,110,220.

No doubt the changing character of the demand, in foreign and domestic markets, accounts in a large degree for the non-progression or even the decline of certain staple fish-products. The tropical markets are changing, and the salt cod and other dried fish for which the demand was formerly enormous in South America, the West Indies, Spain, Portugal, and the Mediterranean countries, are doubtless being replaced by canned fish of various

kinds, while the salt herring markets have also undergone change, and such great markets as those of Russia and Germany have, owing to the war, seriously diminished.

In future the demand will doubtless be for superior cured fish only, and the crude methods of the past will require to be replaced by the most modern and improved curing processes. The Norwegian and Scottish modes of handling and of preparation, especially in regard to cod and herring, have had the effect of raising the standard in all markets, excepting the Oriental. Chilled and frozen fresh fish, and variously prepared canned fish, are improving the public taste in fish-products everywhere. Crudely prepared and badly handled pickled and salted dry fish have been mainly responsible for the decline in demand and the consequent diminished production of many staple kinds in recent years.

NUMBER OF FISHERMEN, HANDS EMPLOYED, ETC.

That there has been a marked decline in the number of men engaging in the Canadian fisheries is not surprising in view of the cessation of growth shown in some most important branches in recent years. Twenty-two years ago the total number of persons employed in all branches of the inland and sea fisheries was about one

hundred thousand (99,269). The number in 1914 was 98,669, of whom 71,776 were actual fishermen, but in 1918 it had fallen to 87,070, 69,350 being fishermen. In 1919, the numbers respectively were 86,160 (67,804 actual fishermen), and in 1920 the total number of employes had fallen to 75,696, of whom 58,197 were actual fishermen. Coincidentally the number of boats and amount of gear used declined, excepting in a few instances, *e.g.*, lobster traps and gear, and the official figures given below for 1919 and 1920 sufficiently illustrate this.

The number of freezing establishments, and curing and smoking sheds has decreased, 827 of the first-named being operated in 1919, and 640 in 1920; while the smoke houses were 8,092 in 1919, and 7,524 in 1920.

CAPITAL INVESTED IN FISHERIES

The total amount of capital sunk in the fishing industries, in nets, boats, vessels and gear, as well as in canneries, curing houses, and freezing establishments, amounted to \$54,694,026 in 1919, as compared with \$50,405,478 in 1920, of which latter amount four-fifths were invested in the sea-fishing operations, and one-fifth in the fresh-water fisheries. This is about six times the amount of capital invested in the fisheries a quarter of a century ago; but the value of the

NUMBER OF FISHING VESSELS, NETS, TRAPS, ETC.	1919	1920
Sail boats, etc.	16,874	12,320
Gasoline boats	15,361	14,611
Vessels (sail and gasoline)	1,191	1,046
Steam fishing vessels	27	31
Steam trawlers	10	9
Lobster traps	1,203,571	1,290,639
Gillnets, seines, etc.	144,605	94,158
Trawl lines	27,062	26,599
Hand lines	76,761	63,020

catches annually has, on the average, only increased about double, the annual returns twenty-five years ago being about twenty million dollars as compared with returns of thirty million dollars or thereby at the present time.

EXPORT AND DOMESTIC CONSUMPTION

It has been frequently claimed that fully 75 per cent of the total annual production of the Canadian fisheries is exported. The amount exported in 1921 is officially stated to have been about 140,000 tons, but as the shipments are for the most part cured, canned or frozen, and therefore gutted and reduced in weight, the total of the fish exports must have amounted to at least 400,000 tons of freshly caught or "green" fish, and the balance, say 80,000 tons, represents the consumption of fish by the Canadian people. The *per capita* consumption in the Dominion amounts therefore to about 25 pounds, an amount which could be readily doubled were Canadians adequately supplied with fresh fish. The amount of fish consumed on the Government National Railways in 1920 exceeded 200,000 pounds, but the use of fish by the people generally has been hampered by the comparatively high price, the irregular and uncertain market supply, and, too frequently, the inferior condition of the shipments due to poor transportation facilities.

No one who sees the large catches of cod, haddock, mackerel, halibut, and other kinds, brought into the Atlantic fishing ports from Gaspe to Grand Manan can question the possibility of enormous expansion. There have been many examples of success rewarding business energy and enterprise along the coast of the Maritime Provinces. Twenty-five years ago, for example, the smoked fish industry (finnan haddies, kippers, shredded cod, etc.) in Digby County, Nova Scotia, did not

reach \$25,000 per annum, but local enterprise has in recent years developed this smoked fish business so successfully that, at the present time, it amounts to almost a million dollars. Most of this smoked fish is consumed in the Dominion.

The total value of the fish exports amounts to about \$30,000,000. It was \$29,578,392 in 1921, and the principal countries to which the fish shipments were sent may be given as follows:

United States.....	\$15,779,473
Cuba.....	1,459,988
Brazil.....	1,216,243
Porto Rico.....	1,169,618
France.....	882,360
Japan.....	527,561
Sweden.....	263,598
China.....	188,394
British Isles.....	7,703,385
British West Indies.....	1,490,008
Australia.....	452,664
Hong Kong.....	444,469
Straits Settlements.....	235,509
British Guiana.....	335,023
New Zealand.....	246,228

FUTURE OF THE FISHERIES

That the Canadian fisheries are capable of great expansion in the future if appropriate measures, private or governmental, be taken, is beyond question. The famous deep-sea fishing grounds on the Atlantic seaboard, exploited for over five centuries by the fishing fleets of many European nations,—British, French, Dutch, Spanish, Portuguese and Norse, and during a more recent period by the United States,—still remain the most productive areas in the world. Cod, haddock, mackerel, halibut, pollock, and other esteemed food-fishes, occur in amazing plenitude, though there are seasonal and periodic fluctuations. The inshore fisheries of Quebec and the Maritime Provinces still yield abundant catches of lobsters, herring, smelt,

alewives, salmon, oysters, clams, and many other marketable kinds, and with proper protection and conservation there is little danger of depletion. The most extensive lobster fishery and lobster canning industries in existence carried on along the Canadian shores, have a value which ranges from four to seven million dollars annually. The Pacific fisheries, the salmon and halibut industries especially, are enormously valuable and productive in spite of fluctuations and recent signs of decline, and with the adoption of wise recuperative steps their future prosperity can be assured.

The fresh-water fisheries, though excessive exploitation on the Great Lakes, Lake of the Woods, and the Manitoba lakes, including Lake Winnipeg, may have threatened them with depletion, still possess extraordinary possibilities, for the vast inland seas in the remoter regions of the Canadian Northwest have never been commercially utilized. They are abundantly stocked with the finest whitefish, lake-trout, sturgeon, etc. Great Bear Lake, Great Slave Lake, Lakes Athabasca, Reindeer, Dubawnt, and Baker, taken together, have a total area of no less than 30,000 square miles, and there are innumerable lakes and streams abounding with fish, over the whole of the vast territory embraced by the Mackenzie, Keewatin and Ungava districts, and, it may be added, the Yukon Territory. The fishery possibilities of Hudson Bay (whose area is about 400,000 square miles) and the long stretch of Arctic waters, extending from Demarcation Point, at the Alaska Boundary, to Cape Chidley, in Hudson Straits, a distance of more than 2,000 miles, present immense possibilities, but the only aquatic resources exploited in the Polar seas have been whales, walrus, seals, etc., all of which show serious signs of impairment.

The Canadian Arctic Expedition 1913-18 found evidence of schools of sea herring, and if these are abundant, the plenitude of other valuable species is more than a probability.

For the full development in the future of the Canadian harvest of the waters it is essential that there should be

1. Greatly improved railroad transportation facilities. Special fast fish-trains and fish refrigeration cars.
2. Modern up-to-date fish markets in every center of population.
3. Better fish wharf accommodation, and more careful and expeditious handling of fish; also the adoption of the best storing, curing, and canning methods.
4. The use and popularization of numerous kinds of excellent fish not at present brought to market. A variety of Canadian flat-fishes, Pacific red cod, pilchards, fresh-water eels, and lake cusk could be utilized, and would add to the national fish supply.
5. Frequent publicity campaigns and the wide circulation of fish-cookery hand books.
6. Greater enterprise in pushing Canadian fish and fish products in foreign markets, and in new markets, especially in South America and the Orient.

Australia and New Zealand are looking for fish from Canada if equal to the high standard of fish-products now being shipped from Britain, Germany and France.

GOVERNMENT CONSERVATION METHODS

At Confederation in 1867 a Department of Marine and Fisheries was created under a cabinet minister, and

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a very complete system of protection, conservation, and administration was adopted, with great benefit to the fisheries generally. By an Imperial Privy Council Judgment in 1898 very important rights, especially proprietary rights in the fisheries, were declared to be vested in each province, and recent changes have been brought about, comparable to the "State Rights" in fisheries, in the United States. Certain responsibilities *re* Fish Culture, Official Supervision, License and Lease Issue, etc., are now being assumed by some of the provinces, but the task of supreme supervision and jurisdiction will continue to be vested in the Federal Government at Ottawa.

The principal features of the Canadian system of administering the fisheries, whether carried out by the Federal or the Provincial Fishery Departments are:

1. Fishery regulations, providing for closed seasons, protection of natural spawning beds and preservation of immature fish, limitation of fishing gear, prohibition of pollutions and river obstructions, etc.
2. Fishery leases and licenses, with conditions attached.
3. Bounties to deep-sea fishermen.
4. A Fisheries' Intelligence Bureau, which keeps the fishermen informed as to the movements of fish, and available bait supplies.
5. Improvement in curing and canning methods under a Fish Inspection Act and the Meat and Canned Foods Act.
6. Experimental fish-drying sheds, and fish guano and oil works.
7. Government instruction along the coast in preparing, salting, and curing fish, and in the latest scientific canning methods.
8. An extensive scheme of fish-culture, hatcheries and stocking operations.
9. Publicity and educational system by lectures and demonstrations and issue of pamphlets and publications on fish life and the promotion of the fisheries.
10. Government rebates and assistance to encourage cheap and rapid transportation of fish from the landing ports to interior cities. Special fish cars under this scheme have been run from the Atlantic coast and from certain Pacific fishing ports to inland centers.
11. A system of state-aided fish and bait freezers inaugurated many years ago with the object of helping the fishermen and promoting the industry.
12. Fishery research stations, under the Biological Board of Canada composed of professors and scientific experts, mainly nominated by the universities, in which fishery investigations of the highest practical value are conducted. Research expeditions have been carried on upon the deep sea and on inland waters. The results are published under the title *Contributions to Canadian Biology*.

Bibliography

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| <p>1852—M. H. Perley, <i>Fisheries of New Brunswick</i>, Fredericton, N. B., 1852.</p> <p>1864—J. M. Lemoine, <i>Les Pêcheries du Canada</i>, Quebec, 1863.</p> | <p>1867—<i>Shore and Deep Sea Fisheries of Nova Scotia</i>, King's Printer, Halifax, 1867.</p> <p>1877—Memoranda on Can Fisheries, Halifax International Comm., 1877.</p> |
|---|---|

- 1879—J. M. Jones, *List of Nova Scotia Fishes*, Proc. N. S. Inst. of Nat. Sci., Volume V.
- 1883—*Fisheries of Canada*, L. Z. Joncas, W. Clowes & Sons, London, 1883.
- 1892—*Great Lakes Fish and Fisheries*, R. Ramsay Wright, Ontario Fish Comm., 1892.
- 1897—*Fisheries of Canada*, E. E. Prince, British Association Handbook, Toronto.
- 1909—British Association Handbook, Winnipeg, *Fisheries of Manitoba*.
- 1908—*Checklist of Fishes of Ontario*, C. W. Nash, Department of Education, Toronto, 1908.
- 1912—*Sea Fisheries of Canada*, Conservation Commission, Ottawa, 1912.
- 1916—*The Oyster Fishery and Oyster Culture*, Ernest Kemp, Marine & Fisheries, Ottawa.
- 1918—*Canada's Fisheries*, pp. 127-134, Dom. Roy. Com., H. M. Stationery Office, London, 1918.
- 1920—*The Sea Fisheries*, J. T. Jenkins, Constable & Son, London.
- 1921—*Canada's Fisheries*, E. E. Prince, *London Times Book of Canada*, 1921.
- 1922—*Fisheries of Maritime Provinces*, E. E. Prince, Industrial Canada Office, Toronto.
- 1923—*Review of Fishery Investigations* under Biological Board of Canada, Can. Manuf. Assoc. 1923.

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The Forests and Forest Industries of Canada

By C. D. HOWE, M.S., Ph.D.

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GENERAL CONDITIONS

THE land area of Canada is 3.6 million square miles. Since much of the area has never been thoroughly explored, only estimates can be made of the extent to which it is covered by forests. Making deductions for the estimated extent of the barren lands in the extreme north, the prairies and plains of the central region, the mountainous areas above tree line in the west, and deductions for the known extent of land under agriculture outside of the prairie region, we derive the statement that approximately one half the total land area is without tree growth. Furthermore, this enormous area of 1,800,000 square miles of forests must be still further delimited, when considered from the standpoint of commercial material, since there are very extensive areas in the subarctic and subalpine regions which do not support trees in sufficient quantities or of sufficient size to make their utilization profitable, even for pulpwood. Such eliminations would reduce the total forest area, as given above, by one half and would thus give the estimated area of commercial forest (containing trees of pulpwood and sawlog size) as 900,000 square miles. A still further reduction must be made on account of the destruction of standing timber by forest fires, and again it is well within the limits of probability to make the divisor the figure 2. In other words, during the past seventy-five years at least one half of the commercial forested area has been burned. It takes that length of time under the average forest conditions in the north country

to make a spruce tree of pulpwood size, that is, six inches in diameter on the stump. Therefore, the burned areas as a whole do not now contain merchantable trees. The fact that the majority of such areas have been burned not once only, but several times, removes them still farther from the merchantable class.

Thus, we come by a series of eliminations to 450,000 square miles as the area in Canada today, yielding commercial timber, that is, sawlogs and pulpwood. The sawlog producing forests are approximately equally distributed between the east (Ontario, Quebec and the Maritime Provinces) and the west (British Columbia and Alberta), while the pulpwood producing forests are continuous from coast to coast, extending northward of the sawlog forests.

It will be seen that the present stands of commercial timber cover only 12.5 per cent of the total area of the country and that this percentage is doubled by including the potential timberlands represented by the burned areas.

CHARACTERISTICS OF THE FORESTS

The heavily forested portions of Canada, as in other countries, are in the regions of greatest rainfall, or in other words, they are relatively near the coasts. The forests diminish in density and in number of component species as one passes towards the interior into areas of decreasing rainfall from either the Atlantic or the Pacific coast. The commercial timber is therefore to be found in two widely separated regions with the plains and

prairies between. There is a subarctic transcontinental belt of forest, to be sure, but its character and inaccessibility make its present value doubtful.

The precipitation in the Atlantic forest region is fairly evenly distributed throughout the year with no protracted period of drought, and the forest consists of both broad-leaved and coniferous trees (hardwoods and softwoods). On the other hand, the precipitation in the Pacific forest region mainly comes in the winter, non-growing months, with prolonged periods of drought in the summer growing season. This condition of affairs practically excludes the broad-leaved trees (hardwoods) and they are represented by poplars and alders growing in the flood plains of the streams, where the roots can reach the ground water level. The forests of the west, then, are prevailing coniferous, the broad-leaved element making up less than one per cent in their composition. Over 80 per cent of the forests of British Columbia, for example, consist of cedar, fir, spruce and hemlock.

Since the forested area of Canada extends from 42° north latitude to far within the Arctic circle in the Mackenzie River valley, there is great variation in the character of the forest as it extends northward. The southernmost portion of Canada, familiarly known as the Niagara peninsula, lying between Lake Huron and Lake Erie, has the climate and flora of the Ohio valley. The basis of the forest, which has now almost entirely made way for agriculture, was maple, oak and hickory, with tulip, magnolia, black walnut, hackberry, chestnut as secondary species.

North and east of the extension of the southern hardwood forest into Canada we find a forest similar to that of northern Michigan, consisting of

sugar maple, yellow birch, basswood, and elm. It occupies particularly the central portion of Ontario. The eastern portion of Ontario, the lower portion of the Ottawa valley on the Quebec side, the portion of Quebec south of the St. Lawrence River, with the exception of the Gaspé region, New Brunswick and Nova Scotia, have a climate and a forest similar to that of the Adirondack and northern New England region, with yellow birch, sugar maple, beech, hemlock and red spruce as the dominant trees.

In ascending the tributaries of the Ottawa River on the Quebec side and the tributaries of the St. Lawrence River from the north, the beech, maple, hemlock and red spruce gradually drop out and are replaced by yellow birch or paper birch and the coniferous element increases until it becomes dominant. Thus the headwaters of these streams are in the control of forests consisting of black spruce, balsam, white spruce and jack pine. In other words, the prevailing coniferous type of the James Bay-Hudson Bay region flows over into the St. Lawrence drainage basin. This tendency is more pronounced as one goes eastward until the softwood type above mentioned reaches the St. Lawrence River in lower Quebec.

Throughout Eastern Canada, as described above, there are frequent and extensive outcrops of sandy soils deposited in glacial lakes that at one time or another occupied much of the region. These sand plains were occupied by white pine and red pine, mostly the former, and they were comparable in extent, in yield and in quality of timber to the famous pineries of Michigan. For over one hundred years white pine was the leading timber product of Canada, and it has contributed more to the wealth of the country than all the other trees

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combined. Its day, however, is past, and spruce now leads.

ESTIMATES OF FOREST SUPPLIES

The estimates of Canada's commercial timber resources are based mainly upon reconnaissance surveys and therefore cannot be considered as estimates in the technical meaning of the term. Perhaps the most reliable of these is that for British Columbia, made by the Commission of Conservation. The same organization made a report upon the forest conditions of Nova Scotia and Saskatchewan. The province of New Brunswick has in progress a very careful and detailed estimate of its

standing timber. Both the Dominion Forestry Branch and the Provincial Forestry Branch have been at work for several years on a timber survey of Ontario. The Forest Service of Quebec is methodically gathering data on the timber supplies of that province.

Generalizing from the information as far as obtainable from the various provinces, the Dominion Forestry Branch has compiled the data in the table given below. In it no allowance has been made for non-accessibility or for deterioration in quality due to over-maturity or insect and fungus depredations. Under the circumstances, then, the figures given are only fair guesses.

ESTIMATE OF THE FOREST RESOURCES OF CANADA

	SAW MATERIAL (In Million Feet Board Measure)			PULPWOOD (In Million Cords)		
	Softwood	Hardwood	Total	Spruce Balsam W. Hemlock	Jack pine E. Hemlock Poplar	Total
Quebec	80,000	10,000	90,000	200	100	300
Ontario	49,500	5,500	55,000	185	65	250
New Brunswick	9,000	6,000	15,000	21	5	26
Nova Scotia	6,500	3,500	10,000	25	6	31
Eastern Canada ..	145,000	25,000	170,000	431	176	607
Alberta	11,500	7,000	18,500	63	129	192
Saskatchewan	4,000	4,000	8,000	31	117	148
Manitoba	3,500	3,000	6,500	26	54	80
Prairie Provinces...	19,000	14,000	33,000	120	300	420
British Columbia	350,000	750	350,750	250	20	270
Total	514,000	39,750	553,750	801	496	1,297

LUMBER PRODUCTION

The table above sets forth the average production for a five-year period in Canada, its value and the extent to which the five leading kinds of timber have contributed. Then follows a statement for each province, its rank

in the Dominion and the five leading timber species and their rank within the province.

It will be seen that spruce is the leading timber tree in the Dominion, the amount of its cut being nearly as

great as that of any other two species combined. The term spruce, however, includes black spruce, red spruce, sitka spruce and white spruce. Until approximately twenty years ago white pine, which now has third place, led in production. Ontario has produced the

largest amount of pine for a great many years, and likewise, also, Quebec has led in spruce production.

British Columbia, Ontario and Quebec are the chief lumber producing provinces. They fluctuate in leadership. In the past ten years British

LUMBER PRODUCTION
Average 1916-1920 inclusive

Canada			Nova Scotia		
3,930,252 M board feet *			226,510 M board feet—5.8%		
\$107,224,031 value			\$5,455,082 value		
Leading Species	M Board Feet	Per Cent	Leading Species	M Board Feet	Per Cent
Spruce.....	1,355,081	34.5	Spruce.....	140,816	62.2
Douglas fir.....	742,871	18.9	Hemlock.....	32,443	14.2
White pine.....	688,201	17.5	White pine.....	12,125	5.4
Hemlock.....	265,839	6.7	Birch.....	9,579	4.2
Cedar.....	133,156	3.4	Balsam fir.....	7,437	3.3
British Columbia			Saskatchewan		
1,168,345 M board feet—29.5%			69,061 M board feet—1.8%		
\$30,000,642 value			\$1,749,799 value		
Douglas fir.....	742,810	63.6	Spruce.....	68,683	99.0
Cedar.....	103,086	8.8	Tamarack.....	259	....
Spruce.....	96,175	8.2	Poplar aspen.....	86	....
Western yellow pine.....	70,178	6.1			
Tamarack.....	42,584	3.6			
Ontario			Manitoba		
1,009,495 M board feet—25.7%			50,949 M board feet—1.3%		
\$30,855,008 value			\$1,209,869 value		
White pine.....	533,367	53.0	Spruce.....	48,517	95.2
Hemlock.....	105,175	10.4	Poplar aspen.....	509	1.0
Spruce.....	93,668	9.2	Tamarack.....	339	0.7
Red pine.....	65,827	6.5	Jack pine.....	216	0.4
Maple.....	24,567	2.4			
Quebec			Alberta		
857,643 M board feet—21.8%			30,353 M board feet—0.8%		
\$23,736,412 value			\$690,264 value		
Spruce.....	509,117	59.4	Spruce.....	24,112	79.4
White pine.....	89,474	10.4	Jack pine.....	2,599	8.6
Balsam fir.....	59,125	6.9	Poplar aspen.....	333	1.1
Hemlock.....	52,068	6.1	Tamarack.....	105	0.3
Birch.....	41,231	4.8	Poplar balsam.....	75	0.2
New Brunswick			Prince Edward Island		
512,631 M board feet—12.1%			7,166 M board feet—0.2%		
\$13,349,883 value			\$172,473 value		
Spruce.....	371,513	72.0	Spruce.....	2,584	36.1
Balsam fir.....	46,366	9.0	Balsam fir.....	1,815	25.3
White pine.....	38,931	7.6	Birch.....	503	7.0
Hemlock.....	19,096	3.7	Hemlock.....	288	4.0
Cedar.....	11,513	2.3	Beech.....	187	2.6

* M = thousand board feet.

Columbia has led five times, Ontario three times, and Quebec twice.

The value of lumber, lath and shingles produced in one year is \$150,000,000. Lumber means boards and deals, dimension stock—not the finished product, as in the case of paper. The minor industries, which depend entirely upon wood, produce products to the value of \$60,000,000 annually. They have an invested capital of over \$50,000,000. They employ 13,000 people and pay annually in wages around \$14,000,000.

To these should be added the industries that depend in essential part, but not entirely, upon forest products. These, such as the horse-drawn and motor-drawn vehicles, produce each year products valued at \$86,553,314. The capital invested totals over \$65,000,000. The employees number over 9,000, to whom are paid wages amounting to nearly \$12,000,000.

Going back to the lumber industry proper, we find that its invested capital reaches \$250,000,000. It employs 55,000 men, and gives them \$60,000,000 in wages annually.

PULPWOOD PRODUCTION

From the tables following it will be seen that nearly three fourths of the pulp and paper production is located in Quebec and Ontario, and that practically one half of the pulpwood is cut in the province of Quebec. Most of the raw pulpwood exported to the United States comes from Quebec. Ontario manufactures a much larger percentage of her product into paper and thus keeps the larger portion of the value of her pulpwood products at home.

While the lumber production has been fairly uniform for the past thirty years, the pulpwood, and pulp and paper production have increased enormously. This is undoubtedly chiefly due

to the legislation in the various provinces around the years 1898 to 1900, prohibiting the export of unmanufactured pulpwood from Crown lands. This brought the mills to Canada. Thirty years ago the value of the pulp and paper exported did not exceed \$200. In 1920 the Canadian mills furnished the United States \$62,000,000 worth of pulp and \$63,000,000 of newsprint. The total value of the manufactured pulp and paper products is \$250,000,000. The various companies have invested in the business some \$375,000,000. They employ 33,000 men in the mills and in the forest and they pay them each year \$40,000,000 in wages. In fact, the making of pulp and paper is the largest manufacturing industry in Canada.

OWNERSHIP AND REGULATIONS

The forests of Canada, with the exception of the farm wood-lots and a comparatively small area of timberlands in private holdings, are the property of the Crown as represented by the Dominion and the several provincial governments. The Dominion Government owns the forest lands in Manitoba, Saskatchewan, and Alberta, and the so-called Railway Belt in British Columbia, a strip of land 20 miles wide, comprising about 11 million acres, on each side of the Canadian Pacific Railway. The total forest area indicated above is approximately 117 million acres, of which 22 million acres have been organized into forest reserves and are administered by the Forestry Branch at Ottawa, whose staff includes twenty technically trained foresters.

The forests of British Columbia, outside of the Railway Belt, those of Ontario, Quebec and New Brunswick are administered with reference to the carrying out of the timber cutting regulations and fire protection by the

respective provincial forestry organizations, which employ in all some sixty foresters and several thousand fire rangers.

The Dominion and the various provincial governments by tender or public auction sell the right to cut

timber. The purchaser of such rights, usually before his woods operations begin, pays a certain sum, called a bonus, for the standing timber, and in addition, he pays a fixed rate, called dues, per thousand board feet or per cord, for what he actually cuts. The

PULPWOOD PRODUCTION
Average 1916-1920 inclusive

Canada			Quebec		
2,237,224 cords*			1,125,914 cords—49.8%		
\$26,712,198 value			\$12,382,418 value		
Leading Species	Cords	Per Cent	Leading Species	Cords	Per Cent
Spruce.....	1,636,367	72.4	Spruce.....	747,840	66.4
Balsam fir.....	473,551	20.9	Balsam fir.....	364,949	32.4
Hemlock.....	113,335	4.9	Hemlock.....	4,584	0.4
Jack pine.....	20,032	0.9	Poplar.....	3,262	0.3
Poplar.....	7,686	0.3			
Ontario			British Columbia		
788,304 cords—34.9%			201,712 cords—8.9%		
\$10,617,628 value			\$2,312,635 value		
Spruce.....	713,193	90.4	Hemlock.....	96,063	47.6
Balsam fir.....	45,815	5.8	Spruce.....	84,427	41.8
Jack pine.....	14,678	1.8	Balsam fir.....	13,253	6.5
Hemlock.....	12,116	1.5	Poplar.....	1,054	0.5
Poplar.....	2,499	0.3			
New Brunswick			Nova Scotia		
123,328 cords—5.5%			17,965 cords—0.8%		
\$1,247,919 value			\$147,597 value		
Spruce.....	74,197	60.1	Spruce.....	16,708	93.0
Balsam fir.....	48,448	39.3	Balsam fir.....	1,085	6.0

PULP AND PAPER PRODUCTION
Average 1917-1921 inclusive

Canada			Quebec		
\$148,611,911 value			\$69,581,166 value		
	Tons	Per Cent		Tons	Per Cent
Pulp.....	773,185		Pulp.....	449,618	58.1
Paper.....	1,029,908		Paper.....	438,042	42.6
Ontario			British Columbia		
\$57,679,926 value			\$14,385,143 value		
Pulp.....	189,662	24.5	Pulp.....	45,857	5.9
Paper.....	475,242	46.1	Paper.....	116,420	11.3
New Brunswick			Nova Scotia		
\$6,358,278 value			\$569,145 value		
Pulp.....	70,205	9.1	Pulp.....	17,843	2.3
Paper.....	.....	.....	Paper.....	.....	.....

* In addition to this the average export to the United States in the period was 1,150,633 cords, of which the value averaged \$10,832,125.

amount of bonus naturally depends upon the quality of the timber and its accessibility. As high as \$20 per thousand feet, Doyle scale, has been paid for white pine. The dues in a province vary with the different classes of timber, and those levied on the same class of timber vary in the different provinces from fifty cents to \$3.50 per thousand board feet and from ten cents to one dollar a cord for pulpwood. In addition to the above, the operator pays an annual ground rent for the use of the land, in most cases at the rate of one cent per acre as well as a fire protection tax, usually also about one cent per acre.

The gross revenues derived from the forests in 1921 were as follows: Ontario, \$3,763,440; Quebec, \$3,035,360; New Brunswick, \$1,081,418; British Columbia, \$1,544,251; Dominion forest reserves, \$248,719; a total for the whole country of \$9,673,188.

The license to cut sawlogs is renewable each year in Ontario and Quebec; at a period of twenty years in New Brunswick and in perpetuity in British Columbia. In the pulpwood operations, however, where both the initial investment and cost of maintenance is much greater, the term of the license

usually extends for a period of twenty years. Furthermore, the Government in all cases reserves the right to change regulations and adjust dues at its discretion, but in actual usage this is done only at intervals of three or five years and only at the expiration of at least a year from publication of intentions.

REFORESTATION

Provisions for artificial reforestation are being developed on a large scale in Ontario and Quebec. For twenty years both provinces have furnished planting material at cost of transportation to farmers wishing to plant up waste areas, and about 250 acres a year are planted in this manner in each province. Ontario has recently embarked upon a plan to reforest 10,000 acres of waste lands each year for a period of sixty years. There are already seedlings enough in the provincial nursery for the first year's installment. Several large pulp and paper companies are also engaged in forest planting, one of them at the rate of 500 acres a year. The Dominion Forestry Branch has distributed about 40,000,000 forest tree seedlings in the prairies during the last twenty years, mostly for shelter belt planting.

The Mineral Resources of Canada

By BALMER NEILLY, B.A.Sc., M.E.

Secretary, Ontario Mining Association, Toronto

We live in a country whose greatest permanent material sources of wealth are its soil and its minerals. But few people realize, however, that not more than about fifteen per cent of its entire surface is suitable for profitable cultivation. Of the two largest provinces generally considered as mainly agricultural, the proportion is probably less than ten per cent. I shall endeavor to show that the remaining eighty-five per cent contains mineral treasures of inconceivable value.

THE above quotation is taken from the Presidential Address¹ delivered by Dr. C. V. Corless to The Canadian Institute of Mining and Metallurgy in March, 1922. Gradually and logically he develops his ideas and in a practical and masterly manner leads the reader to the conclusion that the assertion above quoted is a reasonable and just forecast.

With an area so large and a population so meager, scattered mainly along the southern boundary, is it any wonder that geological information is obtained slowly and at great expense. Fortunately the governments, provincial and federal, have succeeded in attracting to their service a brilliant group of geologists and gradually the general details are being worked out, and as the grant plan unfolds, we begin to gain some conception of the mineral possibilities that as yet have been investigated here and there and only on the outer margin.

THE PRE-CAMBRIAN LAURENTIAN SHIELD

The most striking feature is undoubtedly the great pre-Cambrian

¹Transactions of The Canadian Institute of Mining and Metallurgy for 1922.

Laurentian shield extending far south and nearly surrounding Hudson Bay. This, conceded to be the greatest single exposure of basement formation on the earth's surface, has an area of approximately 2,000,000 square miles, or over half the total area of Canada.²

For years our leading geologists have pointed to this vast shield as the repository of great mineral wealth and experience is confirming this prediction at a rate and in quantity far beyond even the expectations of those who were at times considered over-optimistic.

With the exception of a small extension into New York State and another into the states of Michigan, Wisconsin and Minnesota, all this pre-Cambrian area is Canadian.

It is natural that the first development should take place on its southern boundary and that the process of penetration should be slow. Capital, means of transportation and knowledge are obtained in a new country with difficulty, but, nevertheless, progress has been permanent and the production records to date have laid a foundation upon which one can fairly forecast an accelerating rate of activity and development.

As an illustration of what has been demonstrated, one can point to the fact that although that portion of this area lying in the United States is perhaps less than three per cent, it has given birth to the Lake Superior iron mines that have played so large a part in establishing that country's

²Report of Royal Commission on the Mineral Resources of Ontario, published by the Ontario Department of Mines, Toronto.

prominence in the iron and steel industry.

In addition to iron there was developed the great Michigan copper mines. These mines have been producing copper for well over half a century and under normal conditions even at the present time produce more than two hundred million pounds of copper annually.

Passing north into our own country, we can only here and there raise the curtain that for lack of knowledge covers a great unprospected and unknown mineral territory. Passing the early copper discoveries at Bruce Mines,³ we come to the Sudbury District that, under stress of the requirements of the Allied Powers, produced in the year 1918, over 90,000,000 pounds of nickel and over 47,000,000 pounds of copper.⁴ Nor was this a mere flash in the pan, for after producing metal to the gross value of over \$400,000,000,⁵ it has been estimated that the known reserves developed by the two largest producers are in excess of 100,000,000 tons of ore.⁶

DISCOVERY OF SILVER

In 1903 came the discovery of silver in the Cobalt area. Since that time the mines of that district have produced over 10,000 tons of silver;⁷ practically the world's requirements of cobalt, and over 60,000,000 pounds of arsenic. A recent report of the

³ Report of Royal Commission on the Mineral Resources of Ontario, published by the Ontario Department of Mines, Toronto.

⁴ Report of the Ontario Department of Mines, covering operations during 1918.

⁵ *Canada Year Book* 1920, published by the Dominion Bureau of Statistics, Ottawa, Ont.

⁶ Report of the Royal Ontario Nickel Commission 1917, published by the Department of Mines, Toronto.

⁷ 1922 Preliminary Report by Cyril Knight on the Cobalt Camp, published by the Ontario Department of Mines, Toronto.

Department of Mines for Ontario, while conceding that the apex of silver production in the Cobalt area is well past, predicts that mining will continue in the district for perhaps another century.

From the success obtained in silver mining came a new faith and a growing interest which resulted in the discovery of the Porcupine gold area in 1909, and shortly after in the discovery of the Kirkland Lake gold camp.

Porcupine was once wiped out by a great forest fire and the development of both camps was naturally retarded by war conditions. But they have made wonderful progress. While development work has been confined to an horizon almost entirely above the one thousand foot level, one mine now occupies nearly, if not the first place, on the list of the world's great gold producers and production is rapidly increasing. Work carried on during the past year has not only obtained excellent results for the producers, but will result in early additions to the list of producing mines.

OTHER DEPOSITS

Iron deposits have been found over large areas contiguous to Lake Superior, but unfortunately as yet there is a dearth of high grade ore.

Other mining camps—smaller, but of real promise—are springing up in the districts surrounding the larger mines. Gold and copper ore bodies of importance are being developed in northern Manitoba⁸ and new discoveries are reported in northern Quebec.⁹

On the whole margin of this area under consideration, there is increasing activity. If, then, such satisfactory results have been obtained by working

⁸ Transactions of *The Canadian Institute of Mining and Metallurgy*, Vol. XXIV, 1921.

⁹ Report of the Quebec Bureau of Mines.

over so small a portion, Canadian optimism and faith can be reasonably defended when they point north to the great undiscovered and little known country from where the geologists, few but reputable, have brought reports of areas offering opportunities equal to any of the better known and successfully developed districts.

GEOLOGICAL CHARACTERISTICS

Passing next to the Pacific Highland, we view that area extending from the Rocky Mountain foothills to the Pacific Ocean and north from the 49th parallel for 1,500 miles, containing approximately 550,000 square miles. The reader is more or less familiar with the gold production of the Klondike, but since the days of the northern rush to that district, great gold, silver, copper, lead and zinc mines have been developed and the results obtained have won such wide publicity that names need not be mentioned in an article of this length.¹⁰ Platinum has been discovered. Promising iron ore deposits have been located and the coal deposits will be discussed under a separate heading.

This same geological area extends from the Yukon, south and into Mexico. The production of precious metals in Mexico dates from the dawn of North American history and today mining is still the predominating industry of that country. In 1849 the California gold rush started. The wonderful results obtained carried colonization west across the prairies and built up a mining section in the western part of the United States that has gained world recognition.

So far as one can judge by careful study, there is every reason to believe that Canada, proportionate to her

relative area, has equal opportunities in this western plateau.

Turning to the east, we have still to deal with the Acadian Highland or the Canadian portion of the Appalachian Highland of the eastern United States. This includes Nova Scotia, New Brunswick and eastern Quebec.

The metallic production of this area has always bulked large in considering the utilization of their natural resources. Nor would it be fair, just because the Wabana¹¹ iron deposits happen to come under the jurisdiction of the government of Newfoundland, to omit mention of them. Undoubtedly these iron deposits at Wabana have been developed on such a vast scale as to entitle them to recognition among the great iron deposits of the world.

A VAST STOREHOUSE AND ITS RICHES

Now, having all too briefly endeavored to outline the geological characteristics of Canada, with special reference to mining, and remembering that so far we have made no mention of coal, which, after all is perhaps Canada's greatest mineral resource, an effort will be made to summarize more particularly coal and other individual products.

[Coal]

To gain any adequate idea of Canada's vast reserves of coal reference must be made to the summary prepared by Dr. Dowling,¹² for presentation to the Twelfth International Geological Congress, held in Canada in 1913. Briefly, Canada's reserves are there estimated to be in excess of 1,216,000,000,000

¹¹ Transactions of The Canadian Institute of Mining and Metallurgy, Vol. XIV, 1911.

¹² Vol. LXII, *The Coal Resources of the World*, published by a Committee of the Twelfth International Geological Congress held in Canada, 1913.

¹⁰ Report of the Department of Mines of British Columbia.

of tons. This enormous total taxes one's imagination and perhaps can be grasped better in a comparative way by saying that, roughly, it is nearly sixty per cent greater than the total estimated reserves of all Europe; nearly equal to those estimated for the whole of Asia and equal to one-sixth of the total estimated reserves of the entire world.

[Oil and Natural Gas]

Oil and natural gas have been produced, in a comparatively small way, for many years in southwestern Ontario, but within the last few years a very vigorous campaign has been under way in the Canadian West, extending from our southern border as far north as Norman on the Mackenzie River, a point about nine hundred miles northwest of Edmonton. Here and there encouraging results have been obtained and the larger oil corporations are showing no inclination to curtail their prospecting efforts. Those best fitted to pass judgment are hopeful, but disinclined to make any definite prediction.

[Gold]

Gold mining in Canada may be said to have started in British Columbia in 1859, followed by the boom conditions of the Klondike in 1896. The production from these districts, with that of Nova Scotia, bid fair to give Canada eminence in the industry, but the big years were soon passed and the output had continued to dwindle until the discovery of the Porcupine camp. Now with the Ontario gold camps before mentioned and the gold producers on the Pacific slope, the annual production is rapidly increasing. During 1921, Ontario produced a little over seventy-six per cent of Canada's total, showing an increase of 25.2 per cent over the production

of the previous year.¹³ This is particularly interesting when contrasted with the fact that the world's production is constantly dropping and shows a decrease of over twenty-eight per cent between the years 1915 and 1920.

[Silver]

Silver production is fairly uniform. However, the outstanding producer has been the Cobalt camp, which reached the apex of its prosperity in 1911, with a production for that year of over 31,000,000 ounces.¹⁴ Gradually the output has declined and it remains to be seen whether or not the new discoveries at Keno Hill in the Yukon Territory, can compensate this loss.

In 1921 the total production was 9,210,698 ounces.¹⁵ Of this over seventy per cent was produced as refined silver, nearly nine per cent was contained in blister copper and lead bullion and approximately twenty-one per cent was contained in gold bullion and recovered from ores exported.

[Nickel]

Nickel is a metal of outstanding importance to Canada. It was first discovered in the Sudbury District in the early eighties. Having taken up the mining claims as copper prospects, the owners, some years later, were surprised to find that they contained nickel which was difficult to free from the copper-nickel matte. To make matters worse there was practically no market for nickel when it was recovered. But those interested were not easily discouraged. Nickel-steel armor plate was soon after adopted by the navies of the world. Other uses were found and Canada, during

¹³ Annual Reports of the Ontario Department of Mines, Toronto.

¹⁴ *Ibid.*

¹⁵ Dominion Bureau of Statistics, under *Mineral Production of Canada*.

the war, was producing about eighty-five per cent of the world's demand.

Many other countries have nickel ores, but so far as present knowledge goes and excepting New Caledonia, no foreign ores are high enough in grade to compete successfully against the Canadian deposits.¹⁶

[Copper]

Copper is fairly well distributed across Canada, but the bulk of the production comes from British Columbia and Ontario.¹⁷ The latter, in 1921, produced about one-quarter, mostly as a by-product of the nickel ores. British Columbia is not only the largest producer, but continues to make excellent progress. Some very large and important discoveries have been opened up in northern Manitoba and their development only awaits an increase in the world's demand.

[Other Products]

Zinc is mined mostly in British Columbia, although Quebec for some years produced at the rate of about one million pounds per year.¹⁸ The Canadian production is increasing rapidly, and the 1921 production of approximately 53,000,000 pounds showed an increase of over thirty-three per cent over the 1920 production.

Lead production, as in the case of zinc, is largely from British Columbia, with very much smaller amounts from Ontario and Quebec.¹⁹ There has been considerable growth in the industry, and comparing quantities the 1921 production exceeded that of 1920 by over eighty-six per cent.

Cobalt is found in many parts of central Canada, but its commercial production is almost wholly confined

to the Cobalt silver camp, where it is recovered as a by-product from the silver ores.²⁰

Precious metals of the platinum group are associated in small quantities with the Sudbury nickel ores and recovered in the refining process. Every year some alluvial platinum is recovered in British Columbia. However, the actual production is very small and these are included in this summary merely to show that Canada does produce them in a commercial way.

Before passing from the metallic minerals, we must yet deal with iron ore.

[Iron]

Iron ore is found in many parts of Canada and in nearly every province, but the amount sufficiently high grade to meet smelter requirements and to stand competition from the higher grade deposits in the United States has been extremely small. To our disappointment it must be admitted that Canada today is not producing any iron ore. There are large deposits of siderite and magnetite at present located, running from thirty to thirty-five per cent metallic iron, but these ores must be concentrated, or as it is commonly called "beneficiated," before they can be accepted by modern blast furnace practice.

The governments of British Columbia and Ontario are actively seeking how best the problem of utilizing our own iron ore resources can be solved. It is hoped that some plan of beneficiation may be found that will permit of the commercial exploitation of these enormous low grade iron deposits and it is thought by many who have studied the subject carefully that as the low grade deposits are developed and opened up, that high grade deposits

¹⁶ Report of the Royal Ontario Nickel Commission 1917.

¹⁷ Dominion Bureau of Statistics, Ottawa.

¹⁸ *Ibid.*

¹⁹ *Ibid.*

²⁰ Report of the Ontario Department of Mines, Toronto.

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not now exposed will be found. Certain it is that the finding of a process that will permit of the profitable utilization of our iron ore resources is the big outstanding problem in the mining industry of Canada today. This statement will be made clearer to the reader by adding that the estimated tonnage of these known low grade Canadian iron ore deposits is in excess of six hundred million tons.

[Non-Metallic Minerals²¹]

Coal and asbestos have been previously referred to and the remaining list embraces almost all the common minerals. While in the aggregate the value of our annual production is large, the consumption of any one particular mineral is comparatively small. Important progress is being made in this phase of mining, but space available is not sufficient to permit detailed reference.

So far statistical information has been kept well in the background, because it would be just as feasible to describe a great structure from a progress report on the foundation work alone, as to describe Canadian mineral resources from what has as yet been accomplished. Progress to date is a measure of the energy that has

been put into the mining industry and in no sense can it be said to limit the extent or value of our resources.

With a view then of indicating what has been accomplished, the annual value of Canada's mineral production has been averaged over periods of five years each and an accelerated growth indicated in the diagram that follows.




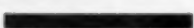



Again, to show the distribution of this production in terms of value, as between the different provinces, the statement on page 108 is submitted.

REALIZATION OF FARMING POSSIBILITIES BY EARLY SETTLERS

In the early days of Canada the settlers with great difficulty eked out a scanty livelihood. Fishing, fur trading and hunting offered the greater opportunities. But as families landed and homes were established, the land was cleared and there was an increasing desire on the part of all to till the land. The results obtained from their crude efforts were so far beyond their expectations and it was so easy to become a landlord, as compared with conditions in the land of their birth, that farming made wonderful progress. As means of transportation was provided and markets opened up, the Canadian

HOW VALUE OF CANADA'S MINERAL PRODUCTION HAS INCREASED

Average Value of Annual Production over Five-Year Periods²²

1857-1891, inc.		Average	\$14,518,679
1892-1896, "		"	19,913,965
1897-1901, "		"	49,270,049
1902-1906, "		"	66,684,163
1907-1911, "		"	94,859,670
1912-1916, "		"	144,771,377
1917-1921, "		"	193,547,535

²¹ Report of the Dominion Bureau of Statistics.

²² *The Canada Year Book* 1920, published by the Dominion Bureau of Statistics, Ottawa.

1857-1891
1892-1896
1897-1901
1902-1906
1907-1911
1912-1916
1917-1921

VALUE OF MINERALS PRODUCED IN CANADA BY PROVINCES
In the Calendar Years 1918-1919-1920 ²³

	1918		1919		1920	
	VALUE	PER CENT OF VALUE	VALUE	PER CENT OF VALUE	VALUE	PER CENT OF VALUE
Nova Scotia.....	\$22,317,018	10.56	\$23,445,215	13.27	\$30,187,533	13.96
New Brunswick....	2,144,017	1.01	1,770,945	1.00	2,225,261	1.02
Quebec.....	19,605,347	9.28	21,267,948	12.04	27,722,502	12.73
Ontario.....	94,694,093	44.82	67,917,998	38.44	78,749,178	36.16
Manitoba.....	3,220,424	1.53	2,868,378	1.62	3,900,207	1.79
Saskatchewan.....	1,019,781	0.48	1,521,964	0.86	1,711,580	0.79
Alberta.....	23,109,987	10.94	21,097,582	11.94	33,721,898	15.49
British Columbia...	42,835,509	20.27	34,865,427	19.73	38,044,915	17.47
Yukon Territory...	2,355,631	1.11	1,940,934	1.10	1,512,006	0.69
	\$211,301,897	100.00	\$176,686,390	100.00	\$217,775,080	100.00

people, by common consent, described their country as the granary of the British Empire.

IMPORTANCE OF MINING

Appreciating, then, the wonderful fertility of our soil and the great area represented by even the fifteen per cent before mentioned, and with no desire to belittle or underrate the importance of agriculture, now or in the future, it must be apparent to the reader that in any well-rounded plan for the development of Greater Canada, mining must play a large and increasingly important part.

The day is not far distant when there will be no inclination on the part of Canadians to describe our country as essentially agricultural in her pursuits.

To estimate the value of our mineral resources, it would be necessary to know, first, the tonnage and grade of all the ore bodies, and, secondly, the cost of production. The first factor cannot be determined and is beyond

our control. However, the second factor, within measure, is subject to our control.

An ore body may contain mineral to the value of many millions of dollars, but if the cost of production is not less than the market value of the metal or mineral recovered, it has no real or present value. However, if, by better methods of treatment, lower transportation costs, decreased taxation or any of the similar influences affecting costs, that production charge can be decreased to a level where a profit is possible, this ore body becomes a real asset. The owner makes a small profit, but what is of far more importance, the country's wealth is increased by a sum equal to the gross value of the production and associated industries profit proportionately.

Our opportunities in this respect are large. Nature has dealt liberally with Canada in respect to water power. The climate is healthful and while in the northern parts the temperature is extreme during the winter

²³ *The Canada Year Book* 1920, published by the Dominion Bureau of Statistics, Ottawa.

months, it is never so severe as to seriously hamper ordinary mining operations. Timber is available almost everywhere.

We have a stable and just government. Title to mining property is secure. Law and order is rigidly maintained. In matters of legislation affecting the mining industry the views and opinions of those particularly interested are carefully considered.

Coupled with these many favorable conditions, is the fact that the Canadian miner, springing from pioneer stock, is a trustworthy, conservative, intelligent and industrious workman.

Canadians are only beginning to recognize the importance of their mining industry. Foreign capital is more easily available for the development of our mineral resources and a very successful future is assured.

Water Powers of Canada

Prepared by Staff of Dominion Water Power Branch, Department of the Interior, Ottawa

ONE of the most striking and romantic stories of modern industrial achievement has been the story of Canadian water powers. The growth and extension of the water power industry in this country has been phenomenal not only from the standpoint of rapidity of development but also because of the diversity of the field which it serves. Niagara is harnessed, so are the turbulent streams of northern Ontario, the glacier creeks and torrents of the Rocky Mountains with heads of hundreds and thousands of feet, the sturdy streams of the Yukon, the picturesque rivers of the Maritime Provinces, the mighty waterways of Quebec; and as yet their might and splendor has been almost untouched and their wastage of energy unchecked.

It is stated that Canada possesses a greater fresh water area than the rest of the world put together; in any case, it is well known that she has storage and, except in the southern part of the Prairie Provinces, power facilities in profusion from ocean to ocean and from the Great Lakes to the Arctic even today after years of study and analysis by government and private engineers the estimate that can be offered as to the extent of these resources is not by any means complete. In those large areas where but vague information has been acquired of river profiles and watershed characteristics, there is an equal lack of knowledge of the other natural resources, radium, platinum, gold, silver, copper, tin, oil, pulpwood, electricity, they may all be there. It is a story yet to be told.

TOTAL RESOURCES

The latest available survey or analysis of our hydraulic resources, carefully and conservatively worked out from all known sources of information on a basis of 80 per cent installed efficiency, has placed them at 18,255,000 h. p. for conditions of ordinary minimum river flow. It is further estimated on the same efficiency basis that some 32,076,000 h. p. could be depended on for six months of the year. It so happens in actual Canadian practice that the average turbine installation in existing plants actually exceeds by 30 per cent the latter figure. Making a direct application of this proportion to the figures quoted it will thus be seen that the known water powers of the Dominion would permit of a turbine installation of 41,700,000 h. p. At the same time it must be remembered that no consideration has been given to rapids or falls whose descents were not well established, nor to ordinary river gradients except at such points as definite studies have been made and the results made a matter of record, so that these figures, large as they may seem, are in reality the *minimum water power possibilities* of the Dominion.

It is an important and opportune fact that a large amount of the available total is situated in the "acute fuel zone," a territory stretching for about 1,500 miles east and west and centering upon the Great Lakes, where coal is not conveniently or economically available.

The distribution of these water powers by provinces is shown in a table at the end of the section.

DEVELOPED WATER POWERS

Only a small beginning, 7 per cent of the estimated total, has been made by way of utilizing this tremendous asset as yet, but small as is the beginning, it yet represents a most astonishing growth in a country of many striking commercial attainments. In 1895 the first high tension transmission of electricity in the British Empire was accomplished between a small power of 1,200 h. p. on the Batiscan River and Three Rivers, Quebec, at 11,000 volts. Dating from 1900 when the total installed horse power was some 150,000 in small scattered plants and mills, its progress has been swift and unfluctuating even in times of abnormal trade depressions till we have at present 2,969,659 operating horse power and over 21,000 miles of transmission and distribution systems scattered from Nova Scotia to the Yukon, in units varying from a few horse power to the 60,000-h. p. turbines in use on the Niagara.

Of the existing developments, 2,164,870 h. p. is operated by central stations, i.e., plants selling power, of which 663,379 h. p. is municipally or publicly owned; 484,228 h. p. is owned by the pulp and paper companies, and 320,561 h. p. is installed in other industries. The total installation for the Dominion averages 338 h. p. per thousand population, a figure which places Canada second only to Norway in the per capita utilization of water power among the countries of the world. Should this rate of growth be maintained, and the indications are that it will be accelerated rather than retarded, the total installation will have reached 3,360,000 h. p. by 1925, 4,110,000 h. p. by 1930, 4,860,000 h. p. by 1935 and 5,600,000 h. p. by 1940. Despite the existing financial depression the year just passed has been one

of marked progress in hydraulic enterprise, some 300,000 h. p. having been installed during the year with additional construction under way.

Hydro power is in itself one of the greatest single industries in the Dominion with a capital investment of 620,000,000 dollars (including over \$90,000,000 in transmitting and distributing equipment) which, if the present rate of progress is maintained, will have become over a billion dollars by 1940. Water power securities are very highly favored in the Canadian financial markets because of excellent earning power and unfluctuating price, but the economic importance of hydro-electric enterprises is not so much due to high capital return and security as to their prime importance to other great industries some of which are absolutely dependent on large blocks of cheap power for their survival and growth.

DEPENDENT INDUSTRIES

The preëminent success of many typical Canadian industries and the future of many projects now under way and under consideration are completely bound up by cheap power facilities. Amongst others might be mentioned the pulp and paper industry, the mining industry, the electro-chemical and electro-metallurgical industry, the milling industry. In fact, the success of Canadian industry as a whole has been in great part due to cheaply available hydro power in unlimited quantities, while these specially mentioned industries have attained peculiar eminence in world supply of their products for the precise reason that water power could be obtained cheaply, conveniently, continuously and in large quantities.

Take, for example, the manufacture of pulp and paper. Statistics show that in 1890 Canada exported \$120

worth of pulp and paper; in 1920 the export value of these products was \$214,421,546. The importance of cheap power here may be judged from the fact that it takes practically 100 h. p. to make one ton of paper per day. It is, therefore, not surprising that motive power used in this industry is practically restricted to hydraulic energy, and Canada's continued supremacy in this field rests on adequate and abundant water powers strategically situated among extensive forest reserves. A total of 644,805 hydraulic horse power is used by the pulp and paper companies of which 484,228 h. p. is developed by the industry itself, the remainder being acquired by purchase.

Similarly, though in less striking fashion, has water power played its part in mining. Canadian gold, silver and nickel properties have reached enormous annual outputs. In many cases large scale operations, which alone made the difference between profit and loss, would have been impossible without ample hydraulic energy at relatively low cost. Some of the new refining practices embody electrolysis of the mineral salts for metallic recovery, a process requiring large and continuous blocks of power. Many mines are so placed geographically that rail haul on coal or untreated ore would be prohibitive. Some are even removed from the railways altogether, but with hydraulic installations at or close to the mines they can yet be worked and the product so concentrated as to permit being hauled to the nearest railway at a profit.

Electro-chemical and electro-metalurgical industries are becoming established in this country because of the power advantages to be obtained, and it is confidently expected by those interested in them that a relatively few years will see a Canadian industry of this type second to none.

RELATION TO AGRICULTURE AND TRANSPORTATION

It has been said that electricity and the motor car can do more than anything else to keep young men and young women on the farm. If these two agents can definitely check this away-from-the-farm movement within the next 25 years a serious social problem will have been solved. The Ontario Government through its Hydro-Electric Power Commission is giving every encouragement for the use of electricity in country districts. It even arranges demonstrations and lends all possible assistance to farmers who are interested. Its significant example will doubtless be followed if and when it can be economically justified by the Power Commissions of Manitoba and the Maritime Provinces so that electric facilities will become a regular feature of rural life.

The benefits of water power on transportation have in the past been indirect. They have permitted the development of industry at points which otherwise could never have contributed appreciable revenue to our railway systems. Today a more definite relationship is being proposed, namely, the electrification of our railways, and while the present time does not seem exactly propitious for radical changes of policy involving large capital expenditures, yet there are many indications that the time is not far distant when water power will replace coal in part at least on Canadian railways. Investigations of the engineering and economic possibilities of railway electrification are now in progress.

COAL EQUIVALENTS AND EXPORTS

In this connection it may be interesting to point out the amount of coal that is being and will be saved by the

use of water power in Canadian industry. The present development represents an annual equivalent of 26,700,000 tons of coal, which, valued at \$10 per ton, represents \$267,000,000. In the year 1940 these annual figures at the present rate of turbine installation and with the foregoing assumption will have become 42,000,000 tons and \$420,000,000. These figures are striking evidence of the outstanding importance and necessity of the present enlightened policy governing the development of our water power resources.

Canada exports considerable quantities of hydro-electric power and has done so for a number of years. At the present time there are eleven exporting companies in various parts of the Dominion including the provinces of New Brunswick, Quebec, Ontario and British Columbia, selling power to the United States. For the fiscal years ending March 31, 1919, 1920 and 1921, the amounts of power exported were 175,013 h. p.-years, 143,003 h. p.-years and 156,017 h. p.-years, respectively, and this export offsets, to a certain extent, the import of coal from the United States.

COSTS

Construction costs and revenue are two aspects of power development that are of exceptional interest to financiers, engineers and, in fact, the general public. As may be imagined, it is altogether impossible to lay down definite figures with respect to either, as local conditions and other influencing circumstances vary so greatly.

An analysis was made a few years ago of 70 representative power plants throughout the Dominion with an aggregate turbine installation of 745,797 h. p., and it was found that omitting all real estate, transmission and distribution equipment, the total con-

struction cost was \$50,740,458, or \$69.11 per horse power installed. This figure is the average capital cost of construction at the power site and is applicable to moderately large plants constructed under market and labor conditions considerably easier than they are today. Increased costs are general in almost all industry, so that present costs of development, while less strikingly so, are, nevertheless, relatively as favorable now as formerly.

The selling price of power in bulk varies greatly. One large producing company sells power adjacent to its plant for as little as \$11.50 per h. p. per year, but this is abnormally low and a more representative figure for cheap power would be \$15 per h. p. per year.

Numerous large industrial companies have their own hydro plants and for many such the generating costs are said to be extremely reasonable, power having been produced under favorable conditions for from 9 to 15 dollars per h. p. per year by plants constructed at pre-war costs.

ADMINISTRATION

For the provinces of Manitoba, Saskatchewan and Alberta and the Northwest Territories including the Yukon, water powers are under the administrative control of the Federal Government. Elsewhere the Provincial Governments have jurisdiction. Originally water power sites could be acquired by purchase, but the present prevailing method of acquiring important sites is by lease. In the provinces of Nova Scotia, New Brunswick, Ontario and Manitoba, Hydro-Electric Power Commissions have been created by the respective governments to operate power plants and transmission and distribution systems as publicly owned utilities; in Quebec the government has not entered the development

and transmission field but has confined its efforts to the development of large water storage works which have proved a great boon to power developing interests as well as profitable to the province.

Investigatory work in the various watersheds throughout the country is carried on by the Dominion Water Power Branch of the Department of the Interior working in close coöpera-

CONCLUSION

In conclusion it may be said that Canada has very great water power resources and has already made a splendid showing in their development. Unexcelled electrical facilities have been provided for the general public as well as ample motive power for industry, much of which owes its existence and security to water power.

TABLE OF AVAILABLE AND DEVELOPED WATER POWER IN CANADA

PROVINCE	AVAILABLE 24-HR. POWER AT 80 PER CENT EFFICIENCY		INSTALLED TURBINE h. p.
	At Ordinary Min. Flow h. p.	Dependable for 6 Months h. p.	
British Columbia.....	1,931,142	5,103,460	312,515
Alberta.....	475,281	1,137,505	33,187
Saskatchewan.....	513,481	1,087,756	.....
Manitoba.....	3,270,491	5,769,444	104,147
Ontario.....	4,950,300	6,808,190	1,349,100
Quebec.....	6,915,244	11,640,052	1,067,414
New Brunswick.....	50,406	120,807	41,280
Nova Scotia.....	20,751	128,264	46,948
Prince Edward Island.....	3,000	5,270	1,860
Yukon and Northwest Territories.....	125,220	275,250	13,190
	18,255,316	32,075,998	2,969,659

tion with provincial governments and commissions, and very complete and authoritative information on all matters affecting water power is on file for the information of those interested. These data, from which the table above is compiled, are being added to constantly, and may be considered the most authentic and comprehensive records available.

Further, the resources as yet untouched will fully provide for the country's requirements for many years to come, and finally, thanks to an enlightened policy of investigation and control by the various governments concerned, there is a guarantee that these resources will be developed efficiently and in the public interest as economic conditions from time to time require.

Industrial Research in Canada

By FRANK D. ADAMS, D.Sc., LL.D., F.R.S.

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INDUSTRIAL research, which accomplished such great things in the development of the German industries, made but comparatively slow progress in most of the English-speaking countries until the outbreak of the Great War. This catastrophe demonstrated within its first weeks, to the most hide-bound industrialists of the old school, that science had given the German industries a command of resources and methods which was conspicuous by its absence among them. In Great Britain immediately following the declaration of war the services of every available research man were enlisted, great sums of money were provided, and the belated attempt was made to gain by research during the early years of the war the knowledge of many things of vital importance with which the Germans had become perfectly familiar in preparing for war in the time of peace. To this end early in 1915 the Imperial Government appointed an Honorary Advisory Council for Scientific and Industrial Research to organize and develop the work of scientific and industrial research as applied both to the problems of war and peace. This Council was to report directly to a committee of the Privy Council, and a sum of £2,000,000 was placed at its disposal for the prosecution of its work.

ESTABLISHMENT OF INDUSTRIAL RESEARCH ORGANIZATIONS

The Overseas Dominions were invited to establish similar organizations for the purpose of bringing the resources of modern science to bear on the development of their industries

and gradually to establish coördination of effort and coöperation in research throughout the Empire. Acting on this suggestion the Government of Canada constituted late in 1916 the Canadian Honorary Advisory Council for Scientific and Industrial Research, and to this body, consisting of twelve gentlemen prominent in the world of science or industry in Canada, were assigned the following duties:

- (a) To ascertain and tabulate the various research agencies in Canada.
- (b) To note and schedule researches and investigations.
- (c) To coördinate all research agencies, so as to prevent overlapping.
- (d) To tabulate the technical and scientific problems that confront Canadian industries.
- (e) To study the unused natural resources of Canada and the by-products of all basic industries.
- (f) To increase the number of trained research men.
- (g) To stimulate the public mind in regard to the importance and utility of scientific research.

The members of the Research Council, as its name indicates, serve in an honorary capacity, but they have working under them a salaried technical executive officer with an adequate staff of assistants and suitable office accommodation located at Ottawa.

CANADA FAR BEHIND

The Research Council, in order to ascertain the equipment and manpower available in Canada for research

and the solution of the technical problems confronting Canadian industries, at once made what might be termed a research inventory of the Dominion. This established the fact that Canada was far behind in the necessary preparations for the scientific development of her industries, and it was obvious that the great majority of Canadians needed to be educated to the advantages of research.

To meet this situation the Research Council proceeded to develop its work along three lines:

(a) Recognizing that there was but a very limited number of highly trained men available for the work of industrial research in the Dominion, the Research Council established a number of fellowships, studentships and bursaries having an annual value of \$1,200, \$1,000, and \$750 respectively. These can be held only by university graduates. A man (or woman) who has shown a marked aptitude in research may be appointed to a bursary tenable for one year, and if he proves to possess a distinct capacity for the prosecution of research may in subsequent years be promoted to a studentship and then a fellowship. The students holding these awards follow their courses of advanced study and obtain their training in research at one or other of the larger universities of Canada. Up to the present time 196 of these awards have been made to 123 persons. Those who have followed courses of study under these bursaries, studentships or fellowships are now almost without exception holding positions in industrial companies in Canada or in Canadian universities, and devoting their time wholly or in part to the work of research. On these grants the Research Council expends annually a sum not exceeding \$40,000, or one third of the annual grant of \$120,000 given to it by the Dominion Parliament.

(b) The Research Council has inaugurated a number of very important researches, such as that on the utilization of Canadian Peat now being carried out at the Alfred Bog near Ottawa under the

Peat Board, and that on the Briquetting of Low Grade Lignite of southeastern Saskatchewan at Bienfait near Estevan, now being conducted by the Lignite Utilization Board. It has also made grants for the carrying out of some 78 researches into questions of special importance to Canadian industry representing an expenditure of about \$160,000.

(c) In order to develop an interest in research everywhere throughout the Dominion and at the same time to mobilize for the purpose of research all the available forces in Canada, it has associated with itself twelve associate or advisory committees composed of the leaders in various branches of science in the Dominion comprising 127 persons in all.

NECESSITY FOR A NATIONAL RESEARCH INSTITUTE

The Research Council, however, recognizes that in order to further develop its work the establishment of a national research institute is necessary. If such an institute were erected and endowed, the Council would be in a position to organize the various industries of the Dominion—many of whom as mentioned below now carry on a certain amount of research work, and all of whom could profit by it—in a wide scheme of industrial research, the Government supplying well-equipped laboratories and shops under a director and one or two assistants of extended and successful experience in conducting research, while the several industries would provide the salaries of the skilled workers and the additional outlay required for the solution of the special problems which they would bring to the Institute.

This plan it is believed would most fully meet the special conditions which obtain in Canada at the present time. A bill for the establishment of such an institute was passed by the House of Commons on May 3, 1921, but

subsequently failed to receive the approval of the Senate. It will probably be introduced again during the session of 1923.

What amounts in the aggregate to a considerable volume of research is now being carried on in the larger universities of the Dominion, in certain of the departments of the Federal Government and in a few of the departments of certain provincial governments, as well as by certain of the larger and more important industries of the Dominion. Accurate statistical information with reference to the number of workers and the total amount of expenditure on their research is not as yet available. Certain general statements may, however, be made.

WORK OF UNIVERSITIES

Information furnished by the nine leading Canadian universities shows that in them about 350 persons are more or less continuously engaged in scientific research, but it is probably safe to say that the total expenditure for research in these seats of learning does not in the aggregate exceed \$250,000 per annum, if, indeed, it reaches that amount.

As a general rule there are no grants to the various university departments specially designated to research, and the proportion of the general grant to a department which it devotes to purposes of research cannot be accurately determined. Little or no scientific research is carried on in the smaller universities. This research work carried out in the Canadian universities is often of the highest value and importance, as, for instance, the work carried out by Rutherford, Soddy and Calendar, in the Department of Physics at McGill University, or the remarkable work recently carried out by Banting and Best on Insulin in the Department

of Physiology in the University of Toronto. It is, however, for the most part not industrial research, but research into those great principles and laws of nature which underlie industrial research. In this type of research the university finds its most appropriate field and makes its greatest contribution to the sum of human knowledge.

GOVERNMENT INVESTIGATIONS

Turning to the great government departments, especially those of the Dominion Government, it is found that in a number of these important investigations are being carried on. A large part of this work, however, is necessarily of purely routine character. It is difficult and indeed impossible in many cases to draw the line between the routine examination of specimens and the study of the numberless little problems which present themselves for study in a great government department day by day and which form part of the work of the department, and the higher lines of investigation which are properly classed as scientific or industrial research. A considerable amount of the work carried on by the government departments may, however, properly be classed as belonging to the latter category.

Among these the Department of Agriculture may be especially mentioned, with its central experimental farm, and various sub-departments, laboratories and offices at Ottawa, with auxiliary farms and laboratories in many widely separated parts of the Dominion. Its work in the development of new varieties of wheat, and other cereals especially adapted to the climatic conditions of Canada, is well known. Excellent work is also done in connection with the extermination of insect pests, as well as in the

domain of field husbandry, botany, chemistry, etc.

The Forest Products Laboratory of the Department of the Interior located at Montreal and which works in association with McGill University has for several years been carrying on important researches on timber physics, wood preservations and the manufacture of pulp and paper. It is well equipped and has done much valuable work.

The Federal Department of Mines, through its two branches, the Geological Survey of Canada and the Mines Branch, has for years carried out a great work which lies in the border region of routine investigation and industrial research, and has contributed largely to the development of the mining industry of Canada.

The Biological Board of Canada, working in coöperation with the Federal Department of Marine and Fisheries, maintains a laboratory at Ottawa and two biological stations, one on the Atlantic Coast at St. Andrews, N. B., and the other on the Pacific Coast at Nanaimo, B. C. In addition to a small staff of permanent officials there are 34 research workers each summer at these biological stations, necessitating an annual expenditure of about \$45,000.

Certain departments of the provincial governments carry on a certain amount of investigation. Among these may be mentioned the Department of Agriculture of the province of Nova Scotia, in the Agricultural College at Truro, the important work of the Ontario Bureau of Mines and the Scientific and Industrial Research Council of Alberta, which is connected with the University of Alberta and concentrates its efforts on the development of the great natural resources of this western province, with an annual expenditure of \$38,000.

INVESTIGATIONS OF INDUSTRIAL PLANTS

Finally, there is a certain amount of work which can be properly designated as industrial research, carried on in connection with much more routine work in laboratories maintained by some of the large industries in various parts of Canada. Thus the Canadian Electric Products Co. Limited, maintains a fully equipped laboratory at Shawinigan, Que., engaged on investigations looking to the improvement of existing processes and the development of new ones, chiefly in connection with the manufacture of carbide of calcium, acetylene, acetaldehyde, acetic acid and the various products developed from these bodies, entailing an annual expenditure in the neighborhood of \$150,000.

The Hydro-Electric Power Commission of Ontario, taking its power from Niagara Falls, has a staff of fifteen engineers and assistants devoting a portion of their time to investigations connected with the operations of the company.

In the manufacture of pulp and paper, which is one of the largest industries of the Dominion, research is becoming of increasing importance. The larger mills have for several years maintained departments of research, and recently many of the smaller mills are employing competent investigators. In a general way it can be said that this is directed chiefly to process control and the elimination of waste, while the Government Forest Products Laboratory and the universities are looked to for the more fundamental research on cellulose and the constitution of raw materials which enter into paper making.

The companies engaged in the mining and smelting of nickel ores in the

Sudbury District also maintain laboratories and experimental plants, in which extensive investigations are carried out in connection with the production and manufacture of the metal in all its stages, while the great steel companies also maintain laboratories where the work carried on is, however, chiefly for

the control of their manufacturing processes.

In conclusion it may be said first, that Canadian industry is becoming increasingly alive to the importance of true industrial research, and, secondly, that increased provision for such research will undoubtedly be made during the next few years.

Primary and Secondary Education in Canada

By S. A. CUDMORE, B.A. (Tor.), M.A. (Oxon.), F.S.S.

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REFERENCE is made, in a famous speech of Lord Macaulay, to the high standard and democratic character of Scottish education, to which he attributes the great successes which Scotchmen have attained in the professions, in industry and in business, throughout the civilized world.

Canada has been called the "Scotland of America"; the reference was originally to its northerly position, but the analogy goes far deeper than that. Many districts in the Maritime Provinces (*e.g.*, Pictou County, Nova Scotia) and in Ontario (Glengarry, Lanark, Middlesex and Oxford Counties) were originally settled by Scottish pioneers, while Lord Selkirk's Red River Settlement of 1811, composed entirely of Scotchmen, was the pioneer settlement in the far-stretching Prairie Provinces. While only one-seventh of the Canadian population of 1911 was of Scottish origin, the influence of the Scots on education was from the commencement out of all proportion to their numbers. The democratic parish schools of Scotland, described by Adam Smith in the *Wealth of Nations*, attended by all and establishing a "career open to the talents," became the model for the educational systems of this new and democratic country, where the conditions of life were such as to defeat the attempts of early governors and ecclesiastics to set up an aristocratic system of education and an established church.

In short, throughout Canada as throughout Scotland, respect for education survives in an unusual degree; parents and children make even today

the greatest sacrifices in order that the latter may attend high school and university; indeed, the majority of the students in Canadian universities are at least partially self-supporting.

The native intelligence and respect for education which exist among the Canadian people may be exemplified to American readers from the investigations of their Immigration Commission, published in Vol. 29 of the encyclopaedic reports of that body. In the general survey of over 2,000,000 school children of 30 large American cities, among whom were included 32,369 children of immigrants from Canada (other than French) the Immigration Commission found that in the four primary grades Canadians other than French had the lowest percentage of any immigrant race, 45.3 per cent, while 41.5 per cent were in the grammar grades and 10.3 per cent, the highest proportion for any immigrant race, in the high schools, the balance being presumably in the kindergarten. The percentages for children of native-born white fathers, given on page 23 of the same volume, were 52.1, 34.5 and 9.1 respectively.

UNDER PROVINCIAL AUTHORITY

Throughout the Dominion of Canada public education is a matter of provincial, as in the United States it is a matter of state concern. Before Confederation the maritime colonies were separated from Ontario by French-speaking Quebec, and in each of these an educational system specially adapted to the local conditions had

come into existence. When Confederation was under consideration, the protection of existing vested rights was the predominant consideration. As a result, Section 93 of the British North America Act, which embodies the Canadian Constitution in so far as that Constitution is a written one, provides that in and for each province the legislature may exclusively make laws in respect of education, except that "nothing in any such law shall prejudicially affect any right or privilege with respect to denominational schools which any class of persons have by law in the province at the union."

Inasmuch as the administration of public education is one of the chief functions of provincial governments, there is in each of the provinces, except Quebec, a department of education administered either by a member of the Provincial Executive Council or by the Executive Council as a whole. In practice, however, the routine administration is in the hands of the permanent officials of the department of education, who are members of the permanent civil service. In Quebec the Superintendent of Public Instruction, appointed by the Government, is ex-officio President of the Council of Public Instruction; the link between the Department of Public Instruction and the Government is the Provincial Secretary; there are also two Deputy-Heads, called the French and English secretaries of the department.

Since the departments of education are permanent authorities, controlled as to the details of administration by permanent officials who are much better informed on educational matters than the person who through the vicissitudes of politics becomes for a time Minister of Education, educational policy is relatively permanent; further, the control of the Government

over education throughout the province is relatively stronger than in the United States. A capable Deputy-Minister or Superintendent of Education impresses his personality and his views upon the whole system of his province, especially as in practice he controls the payment of government grants, which constitute an important part of the revenues applied to educational purposes. (In 1921, out of a total expenditure on public general education in Canada amounting to \$102,561,425, \$11,898,084 came from the provincial governments.)

The department of education in each province naturally has its headquarters at the capital of the province. Its local representatives are the school inspectors, who in all provinces except Ontario are appointed and paid by the Government; in Ontario high and separate school inspectors are appointed and paid by the Government, while public school inspectors, except in the unorganized districts, are appointed by the county or city municipality from among the persons recognized by the department of education as qualified for such appointment, and after appointment receive half their salary from the municipality and half from the province.

SOME CRITICISMS

Through its inspectors, the department of education maintains its control over the whole body of teachers, throughout their daily work. It also appoints and pays the teachers of the normal schools, and decides upon the academic standing necessary to qualify for admission to these, thus controlling the entrance to the teaching profession. It also determines the subjects to be taught and the details of curricula throughout the province, and authorizes the particular text-books to be used in each subject throughout the

schools. This naturally has the tendency to reduce public education throughout the province to one uniform type, and has been unfavorably criticized on that account. So far as the primary schools are concerned, however, it is replied that the young and inexperienced teachers too often employed are in need of expert control, and that the results from the present system are on the whole better than could be obtained in any other way. For the same reason, it is claimed that the average teacher or even the local educational authority is not as well qualified as the department of education to make the best choice of textbooks.

Perhaps a more serious criticism of the system is that each province favors its own and that there are considerable obstacles in the way of the teacher who has qualified in his own province securing a position in any other province. This situation arises partly from the fact that under ordinary circumstances the number of persons annually turned out by the normal schools is a considerable percentage of the total number of teaching positions in the province. As this is the case, the authorities in each province naturally give the preference to home-trained teachers.

The centralized control of education has also been in the past responsible for the number of examinations imposed as tests, especially in the secondary schools. The writer, when taking his secondary school work in an Ontario high school, regularly wrote each year an examination set by the department of education, on the results of which depended his non-professional standing with the department, and in a general way, promotion in the school. The passing of departmental examinations is, however, no longer essential to promotion in school. Indeed, it

may be said that along many lines today there is a tendency toward greater flexibility, especially in the high and technical schools, where instruction must to a greater extent be adapted to the needs of the individual, and where the local authorities are presumably more conversant with the needs of each locality.

EDUCATION IN QUEBEC

In Quebec there are two distinct systems of education, in both of which the teaching of religion takes a prominent position—the Protestant and the Roman Catholic systems. In the former, which is under the control of the Secretary to the Department of Public Instruction and the Protestant Committee of the Council of Public Instruction, the curriculum and the general system of education is similar to that in the other provinces, except that public and high school grades are taught in the same school, and that the highest grade is Grade XI, from which students are matriculated to McGill University and Bishop's College, the two Protestant English-speaking universities of the province.

In the Roman Catholic schools, which are mainly French-speaking as the Protestant schools are English-speaking, the administration is in the hands of the French Secretary to the Department and the Catholic Committee of the Council of Public Instruction. General elementary training is given by means of a curriculum, extending over eight "years," some of which require more than a year to complete, the work of the eighth "year" corresponding in a general way to the work of Grade IX or possibly Grade X as that work is generally understood. The student who completes this eight "year" course in the Catholic academy is, however, at the "jumping-off" point. While, accord-

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ing to the general standards of education on this continent, he has done some secondary work, he cannot enter a secondary school nor matriculate at the French Canadian universities, Laval and the University of Montreal. These derive their regular students from the boys, largely drawn from the professional class, who enter the 21 Roman Catholic classical colleges scattered throughout the province (the only Roman Catholic schools regarded as "secondary schools") at an early age and not only cover there the work of the primary and secondary grades, but proceed through the Arts course of the university, the degrees being conferred by the University of Montreal and by Laval University, Quebec. The high literary culture of French Canadian statesmen and professional men generally, is largely due to the influence of these colleges. Teaching convents in Montreal, Quebec, and other centers furnish the same literary culture in the education of the French Canadian women of the province.

RECENT DEVELOPMENTS IN EDUCATION

In recent years in Canada there has been a tendency to increase the ages of compulsory attendance and to enforce the law. This tendency has been most marked in Ontario, which contains one-third of the population of the country. Here in 1919 an Act was passed providing (1) that children 8 to 14 must attend full time and that children from 5 to 8 once enrolled must attend full time to the end of the school term for which they are enrolled; (2) that adolescents from 14 to 16 who have not attained a university matriculation standing must attend full time; those exempted owing to circumstances requiring them to go to work must attend part time *during the ordinary working day* for 400 hours a year in municipalities providing part time

courses, which all municipalities of 5,000 population and upwards *must* do from September, 1922, smaller municipalities having an option in the matter. Further, those who have not attended full time up to 16 will be required after September, 1923, to attend 320 hours a year of part time courses up to age 18. In other words, an Ontario adolescent has the alternative of full time attendance to 16 or full time attendance to 14 plus part time attendance to 18.

As a result of the keeping of children in school to a more advanced age, increasing attention has naturally been devoted to technical education of various kinds, especially as required by those students who are not adapted to higher intellectual work. The number taking technical training of some kind or other is rapidly increasing.

VOCATIONAL AND TECHNICAL EDUCATION IN CANADA

As late as the seventies and eighties of the last century little vocational education was given in the schools;¹ private business colleges were established in the cities about this time.

Among the first vocational courses to be introduced into schools were commercial courses, which were introduced into the high school curricula of On-

¹ An exception to the above statement may be made in the case of Quebec, where even in the 17th century vocational instruction formed a prominent feature of school training. Bishop Laval had a school at Cap Tourmente where academic and vocational training were given. In fact Quebec has always emphasized the vocational side of school work and a school of domestic science at Roberval is said to be the oldest of the kind in the world. In Manitoba, also, vocational training was a feature in the earliest schools. As early as 1818 training was offered in agriculture and in 1829 a school was opened for girls, where weaving was taught in addition to the other branches, while by 1833 vocational training was given to both the Roman Catholic and Protestant elements of the population.

tario and Manitoba in 1899, of British Columbia in 1905 and in Saskatchewan and Alberta about the same time. The classical colleges of Quebec were also among the first to provide a commercial course for those of their pupils who did not desire to enter the professions, and a school for commercial studies was founded in 1907 at Montreal.

Agriculture was first taught in special colleges, the Ontario Agricultural College at Guelph, a government institution being founded in 1874, the Nova Scotia Agricultural College in 1888, the Manitoba Agricultural College in 1903, Macdonald College at Ste. Anne de Bellevue, Que., 1907. In Quebec the agricultural college at Ste. Anne de la Pocatière, the first in Canada and the second on the continent, was founded in 1859, and the Oka Agricultural Institute was established in 1890. The Ontario Veterinary College, founded in Toronto as a private venture in 1862, was one of the first on the continent, and for many years drew its students very largely from the United States. In 1908 it was taken over by the Ontario Government, and has recently been transferred to Guelph.

Training in handicrafts was introduced into the school in the form of manual training for boys and domestic science for girls. The former was originally intended merely as a training in the use of tools, partly as a recreation and partly as a means whereby the boy could get some idea of his capacity as a mechanic. A form of this manual training was introduced into Ontario schools in 1883, and into the schools of Nova Scotia in 1891; in the latter province it was made compulsory for teachers in training in 1893. In the Prairie Provinces manual training was introduced in the first decade of the present century.

The second decade of the century

has, however, seen the most rapid development in technical and vocational education. Following upon the publication of Dr. Seath's report on *Education for Industrial Purposes* and the report of the Royal Commission of 1910 on *Industrial Training and Technical Education*, published in 1913, technical education has made rapid strides, partly due to the stimulus given to manufactures by the war. By 1915, manual training courses in Ontario had branched out into industrial, technical and arts school and in that year a large technical school was opened in Toronto. The Kelvin and St. Johns Technical Schools in Winnipeg date from 1911, and the great technical school in Montreal from the same year.

AID GIVEN BY DOMINION GOVERNMENT

While educational administration is a matter for the provinces, the Dominion Government, realizing the national importance of vocational education, has supplemented the provincial funds available for these purposes. In 1913 was passed the Agricultural Instruction Act, distributing \$10,000,000 in ten years among the provinces for the advancement of agricultural education. In 1919 a similar sum was voted for technical education to be divided within ten years among the provinces approximately in proportion to population, but so as not to exceed the sums expended by the provinces on technical education. These grants have been most effective in turning the attention of the provincial authorities toward vocational education, which is making great strides, especially in the eastern manufacturing provinces.

DESIRE FOR EDUCATION SHOWN IN FIGURES

Out of a total population of 8,788,483 in 1921, Canada had, so far as statistics

are available, 2,030,450 persons in attendance at educational institutions, or 23.1 per cent of the population. Of these 1,784,780, or 20.3 per cent of the total population, were enrolled in ordinary day schools under public control, the average daily attendance numbering 1,241,264. Those attending technical schools, including agricultural and commercial schools, and short technical courses in universities, numbered 83,379, and teachers in training in normal schools, 6,113: those

in private business colleges were 29,309, and those in other private schools under college grade, 68,101. Those in attendance at the regular courses of universities numbered 22,917.

The teachers in schools under public control numbered in 1921 55,951, 9,179 males and 46,441 females. The total expenditure on schools under public control was \$102,561,425, of which governments contributed \$11,898,084, and local taxation most of the balance.

Higher Education

By G. S. BRETT, M.A.

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THE development of education in Canada follows a natural course. While it is obvious that many problems are met and many peculiar situations occur, it is none the less true that the general character of the progress is universal and normal. Though everything may still be explained by saying that Canada is a young country, the explanation becomes less adequate every decade. The meaning of that phrase seems to be, primarily, that we must expect all interest and all education to be directed toward material prosperity; that man must eat first and think afterwards; and that this order of importance will naturally dominate the whole scale of values by which the inhabitants of Canada will live. This argument neglects the all-important factor of origins. If the country is new in the sense of undeveloped, the civilization brought into it was not equally new. If the roads and the houses were lacking, traditions were from the first singularly mature and, whether British or French, they were consciously upheld as a treasured heritage. The actual course of development, which to some extent contradicts common opinion, is really normal in character. Elementary education, once organized, is regulated by needs so fundamental that its content is the same in all times and places. Distinctions begin where choice and specialization begin, and here we find that the original tendency was to emphasize that classical culture which dominated the life of the countries in which Canadian leaders were born and bred.

SPECIALIZED TRAINING

On a *a priori* grounds it has been assumed that Canada built up, on a basis of scientific, practical or material education, the structure of a higher system of classical, linguistic or philosophical training. But in fact the main tendency has been in the reverse direction. In the earlier stages educational work was divided by the natural and simple plan of providing elementary teaching for the general population and higher education for the professional classes. The spirit and needs of these professions tended to uphold the primacy of the classics (Greek and Latin), of literature in general, history and philosophy. In Roman Catholic institutions the value of this type of education is still fully appreciated, but as a whole the education of the country is moving along new lines. The decisive factor is the increased demand for more elaborate training in the positive activities of life.

The response to this demand is seen in the rapid growth of special departments for the study of agriculture, forestry, engineering and medicine. These automatically create larger classes in the sciences which they apply, as, *e.g.*, biology, botany, mathematics and physics, physiology and anatomy. The field of education is becoming more complex every day, and the most important problem which the administrator has to solve arises from the relation between *training* and *education*. Some of the teachers in our universities can still remember when modern languages were regarded as a barbarous innova-

tion, while the sciences were tolerated as a harmless way of contemplating the marvels of creation.

A PROBLEM

The predominance of industry in modern life has had the effect of filling in the ancient gap between professions and labor. Labor itself is professionalized, and no line can be drawn decisively between the one and the other. This creates the great problem of the student who wants to go beyond the limit of the schools but does not want to reach the highest limit of a university course. In Canada, it must be remembered, the influence of British

traditions produced an organization of education in which the school and the university were the only recognized units. In other words, the "college" is not in the Canadian system an intermediate unit. Conversely, a university doing no graduate work is not an anomaly in Canada, mainly because British universities until recent times provided no systematic education for any degree above that of the bachelor in arts or science.¹ At the present time

¹ The University of London has long been accustomed to grade its work by stages from matriculation to B.A., M.A., and doctorate; but all the work could be done extra-murally and this was itself directly opposed to the older belief

INSTITUTION	ORIGINAL FOUNDATION	PRESENT CHARTER	STAFF	STUDENTS
University of St. Dunstan's, Charlotte- town, P. E. I.	1855	....	14	241
University of King's College, Windsor, N. S.	1789	1802	23	151
Dalhousie University, Halifax, N. S.	1818	1863	93	688
Acadia University, Wolfville, N. S.	1838	1840	24	333
University of St. Francis Xavier, Anti- gonish, N. S.	1855	1909	15	270
University of New Brunswick, Fredericton, N. B.	1800	1860	14	138
Mount Allison University, Sackville, N. S.	1858	1886-1913	21	259
University of St. Joseph's College, St. Joseph, N. B.	1864	1898	36	400
McGill University, Montreal, Que.	1821	1852	344	3,045
University of Bishop's College, Lennox- ville, Que.	1843	1853	9	62
Laval University, Quebec, Que.	1852	1852	816	9,872
University of Montreal, Montreal, Que.	1878	1920	392	3,511
University of Toronto, Toronto, Ont.	1827	1906	559	5,060
Victoria University, Toronto, Ont.	1836	1836	31	598
University of Trinity College, Toronto, Ont.	1851	1852	25	147
Western University, London, Ont.	1878	1908	75	363
Queen's University, Kingston, Ont.	1841	1841	169	2,351
University of Ottawa, Ottawa, Ont.	1849	1866	171	2,743
McMaster University, Toronto, Ont.	1857	1887	22	293
University of Manitoba, Winnipeg, Man.	1877	1877	198	1,390
University of Saskatchewan, Saskatoon, Sask.	1907	1907	80	1,136
University of Alberta, Edmonton, Alberta	1906	1910	84	1,106
University of British Columbia, Van- couver, B. C.	1907	1908	117	1,159

the most acute problem for higher education in Canada probably lies in this quarter. It is necessary to extend the work upwards, both in quantity and quality: this virtually means adding to some of the existing institutions a staff adequate to deal with the most advanced type of literary and scientific research. To this point we can return later when some other facts have been considered.

The provision made for higher education in Canada can be estimated from the tabulated statement, on p. 127, the data being taken from the Government Reports as printed in the Year Book for 1922.

ACTS OF FEDERATION

The general significance of these figures can be regarded as obvious. The major institutions are McGill University, University of Montreal, University of Toronto, Queen's University, Dalhousie and Manitoba. The large number accredited to Laval University includes 7,268 students in "courses leading to Matriculation and other Preparatory Courses": also the total (9,872) is to be understood as including 9,151 "registered in affiliated colleges." Similarly the University of Ottawa includes in its total 2,484 in preparatory courses, and out of the total 2,743 there are 1,926 in affiliated colleges. In the case of Toronto a system of federation unites the four colleges, University, Trinity, Victoria and St. Michael's, while students from other colleges (*e.g.*, Wycliffe and Knox) are registered for courses leading to degrees in arts in the university. The University of Toronto is an outstanding example of the process by which colleges arise independently and then

that education primarily means a personal relationship.

unite for specific purposes. Trinity, Victoria and St. Michael's are independent institutions belonging to the Anglican, Methodist, and Roman Catholic communities respectively. University College is the undenominational college and is dependent on provincial revenues. The sciences which demand an equipment that cannot be satisfactorily supplied without centralization are provided for by the university and students in all the colleges enjoy these facilities (*e.g.*, in physics, chemistry, biology, geology, economics, modern history, and others) under the terms of their respective acts of federation.

The details of these acts of federation need not be further described. This may be called the method of local federation. It has very obvious advantages in two respects, (a) in efficiency and economy of management, especially in subjects which require expensive laboratory equipment; (b) in uniting and standardizing the educational work in general. Consideration of the table on p. 127 will show that in Eastern Canada there has developed a situation which may call for analogous methods. Difficulties both geographical and sentimental will make any process of amalgamation very complex, but a scheme to unite some or all of the existing institutions in the Maritime Provinces is now actually being considered. This may easily prove the beginning of other schemes, for there is more than one direction in which both decentralization and centralization might prove desirable. The larger universities tend to be overloaded with work which might profitably be done in local centers, either by increasing the scope of the best existing educational institutions or by creating new institutions to serve as preparatory colleges.

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OTHER INSTITUTIONS

In addition to the major institutions named in the table on p. 127 there are sixty-seven (67) institutions ranked in the Dominion statistical report as professional and affiliated colleges (*Year Book*, 1922 pp. 164-5). These have a total teaching staff of 1,550, and the number of students is 20,486. Theology, classics, agriculture, art, law, pharmacy, education and general culture are some of the subjects for which these colleges provide training according to their specific character and aims. The record of the last decade shows a steady increase in numbers and a corresponding increase in expenditure, the figures in both cases indicating that the demand for education is growing annually and is well distributed over the whole country. The professional and affiliated colleges assist the work of education in two ways. In some cases they provide for distinctive spheres of training, such as law, agriculture, and dentistry, which involve special conditions; in others, they carry on the preparatory work required by higher institutions which may regulate their work with the direct intention of making it continuous with the institution to which the college is affiliated.

GENERAL AND SPECIAL EDUCATION
POSSIBLE

The general significance of the data may now be summed up. By means of institutions, in some cases privately endowed and in others publicly supported, both general and special education is provided throughout Canada in schools, colleges, and from the more elementary grades to the university entrance standard. The colleges are institutions which provide advanced training for specific purposes without granting degrees: special certificates or diplomas may be given to students

by these institutions, or the university to which the institution is affiliated may act as examining body and give the degrees. Some colleges combine both features, having a charter as a university: for example, a theological college giving its own theological degrees and also training students in arts for degrees given by another university to which it is affiliated. The highest level of education is the university which primarily gives education up to the standard required for the degree of bachelor in arts or science.

INTERNATIONAL MOVEMENT

Reference was made above to schemes of federation and coördination which have produced distinctive results in certain cases. These local and independent enterprises suggest the possibility of future developments which might be undertaken in the interests of provincial or Dominion organization. Before 1914 students desiring a doctor's degree frequently regarded Germany as the only desirable resort: the less ambitious elected to fulfil the requirements in a university of the United States. The epoch-making period 1914-1918 directed attention to this emigration of talent and a concerted effort was made to coördinate work done in France, Great Britain and the North American continent so that students might more easily complete their courses in one or other of these countries. This international movement has been of considerable value. The researches to which advanced students devote themselves cannot in reality be arbitrarily localized. But it is not possible for all students to carry out such elaborate schemes, and it is not desirable that untrained students should dissipate their energies in a wealth of material which they have not learned to control.

NEED FOR POST-GRADUATE WORK

Apart, therefore, from the ultimate question of material, there is large scope for post-graduate work in Canada. The table of institutions given on p. 127 is significant in the matter of dates. The western institutions are of recent date: the middle and eastern parts of Canada have had more time to become mature and undoubtedly have the advantage in all cases where accumulated material and a specialized staff are needed. On the other hand, the universities of the West are more isolated and independent: they require to be more complete individually, while in the East proximity to larger universities in Canada or the States, reduces the necessity of duplicating staff and equipment. The logical conclusion would be that some institutions should be encouraged to develop the type of work which a student undertakes after getting his bachelor's degree. The plan adopted should pay regard to the conditions of different provinces and aim to provide a center which would be recognized as having distinctive qualifications for research work, to which accordingly the other educational institutions would send advanced students. In addition to this, the provinces should be regarded as units in a general scheme for organization in the Dominion as a whole, and the institutions which can show adequate resources in particular departments of work should then act as similar centers to which students from all provinces might be sent.

Recent statements (December, 1922) show that at present complete organization for graduate studies and research exists at McGill University, Montreal, the University of Toronto and Queen's University, Kingston.

This means that students can continue in these universities until the doctorate degree is conferred, but the statement does not imply that a staff is appointed exclusively for work of this grade. For Roman Catholic students the University of Montreal provides opportunities for obtaining the degrees of Doctor of Science, Doctor of Letters, or Doctor of Philosophy. This University acts as a center of organization for twelve affiliated colleges in which the undergraduate work is done. The graduate work undertaken is mainly in arts: graduate work in law, medicine and other professional branches is usually taken either at Paris or in the United States. Practically all universities from east to west extend their teaching for one or more years beyond the requirements for B.A. The number registered for the higher degrees averages 10 to 15, with the exception of certain institutions: *e.g.*, McGill and Toronto report more than 100, Alberta more than 80, Manitoba 42. The larger numbers in the western universities show a gratifying activity in this direction. These universities also report a relatively large number of students proceeding to the United States for the completion of their studies (*e.g.*, from Alberta 15, from Saskatchewan 15, from Manitoba 6), but these figures are approximate and comparison with other parts of Canada is made difficult by the different conditions: in the East, for example, twenty students from Dalhousie University alone are reported as continuing their work in the United States. Very few cases of students coming from the United States to Canada are reported and these would probably be explained by special circumstances other than educational facilities.

The Canadian National Railways

By D. A. MACGIBBON, M.A., Ph.D.

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THE application in Canada on a large scale of the principle of government ownership of railways is the result of a condition rather than the outcome of a theory. While there was a certain current of public opinion in favor of nationalizing the means of transportation, of itself this current had not sufficient power to commit the Canadian Government to such a course. In the actual event it was to avoid a threatened collapse in national credit that the acquisition of 20,000 miles of railways was forced upon the people of the Dominion. That fact, plus the further fact that the Dominion of Canada stood as guarantor for a large amount of bonds issued by the roads in financial difficulties, were the controlling consideration in taking over the lines.

GOVERNMENT OWNERSHIP

The train of occurrences leading up to this stroke of policy is well known. The outstanding feature was the lavish encouragement of railway construction by government grants, loans and bond guarantees. As a natural result there was overbuilding. By 1914 it was evident to all that the future had been over-discounted and that an exceedingly serious railway crisis was at hand unless the body that was largely responsible for this condition stepped in and assumed the burden. With no great enthusiasm for the task this is what the Canadian Government has done.

The principal parts of the system so acquired are the Grand Trunk Railway, 3,948 miles; the Canadian Northern Railway, 9,259 miles; the Grand

Trunk Pacific, 2,840 miles; the National Transcontinental, 2,007 miles; and the Intercolonial Railway, 1,593 miles. In addition there are the Prince Edward Island system, 279 miles, and the unfinished Hudson's Bay project of 334 miles.¹ The present Canadian railway problem is how to bring these lines into a coherent, unified self-sustaining system. The circumstances under which they were built, the financial problems which threw them upon the Government, and their physical situation and relationship to each other, make this indeed a very great task. Further, the form of management devised, though possibly the best that could be achieved, adds an additional complicating factor to the problem.

The Royal Commission, appointed by the Dominion Government in 1916, recommended that a new public authority be created by incorporation to take over these railways and operate them for the people of Canada. The main reasons for this recommendation were to minimize political interference and to avoid complications arising out of considerable American mileage. The failure of an appeal of the Grand Trunk shareholders to the Privy Council made it possible to complete recently the formal organization of the new system which since 1918 has been known under the general term "Canadian National Railways."

The distinctive feature of this corporation is a board of directors which owes its appointment to the Dominion Government rather than to a body of

¹ Additional mileage constructed since make these figures slightly inaccurate in certain cases.

shareholders. In the selection of members territorial considerations and the claims of labor to representation have both been given recognition. At the same time there is a political tinge to the appointments. This does not apply to the chairman of the board, Sir Henry Thornton, who comes to the position with a fine record gained in the American and British railway service. He has been promised a free hand in the development and execution of his policy. It has been stated that "the Government has elected to administer the National Railways in substantially the same way as though they were privately owned." The aim set forth by the new chairman is "that the Canadian National Railways should be put upon a self-supporting basis and the burden on the purse of the taxpayers stopped as quickly as possible."²

DIFFICULTIES

In view of these declarations and promises we may premise that there are two questions to be considered: (1) If the entrepreneur point of view is successfully maintained what promise of success does the present situation hold forth? (2) What forces and obstacles stand in the way of "administering the National Railways in substantially the same way as though they are privately owned?"

Reserving the second question for later discussion, let us consider the situation of the Canadian National Railways as though it were not a government-owned system. In the first place, the financial history of at least two-thirds of the constituent lines show that when constructed they held forth such little promise of financial success that they were unable to attract private capital into the investment except and in so far as it was bolstered up by

Government guarantees. Further, as operating ventures, they were failures, in some instances ghastly failures. We need not suddenly expect a change. In 1921, on 17,338 miles, the gross earnings were \$126,691,455, operating expenses \$142,784,357, operating deficit \$16,092,901. It is announced that operating revenue will cover operating expenses in 1922. The annual fixed charges of the Canadian Northern and Grand Trunk Pacific was \$40,700,000. The total deficit³ of all the national lines was \$56,600,000.⁴ The total investment in the national lines is estimated by Sir Joseph Flavelle at \$1,652,000,000. A true accounting including interest on the loans and advances made by the Government, it is estimated would give annual fixed charges in round figures of \$60,000,000. Sir Henry Thornton estimates that the National Railways must earn \$40,000,000 net annually to stop further advances from the Government. This calculation would leave out of consideration interest on the cost of the National Transcontinental and the Intercolonial, these items being merged in the general public debt of Canada. Even with this relief, the national lines must earn \$40,000,000 annually to meet guaranteed interest charges.

CAN THE GOVERNMENT ESTABLISH A SELF-SUPPORTING BASIS AND HOW?

It is a principle of railway reorganizations that fixed charges should be scaled down until expected income will be ample to meet fixed charges. Viewed as a reorganization we may consider that Canada has written off a sum equivalent to the cost of the Intercolonial, and the National Transcon-

² Statement by Hon. W. C. Kennedy, Minister of Railways in Parliament, April 11, 1922.

⁴ The Grand Trunk was technically still a private line. In 1922, there was a net operating revenue of \$5,000,000, and a net deficit of \$4,500,000.

³ Addressing the Montreal Board of Trade, December 5, 1922.

timental. As the Dominion is guarantor of the bonds it is impossible to relieve the country of any further burden of fixed charges. There remains, therefore, the very grave doubt as to whether the national lines can show an improvement sufficiently great to take care of this interest on guaranteed securities. The ability to do so rests upon the possibility of increasing traffic and of reducing costs by completely welding together the lines into a single physical entity.

Increased traffic depends upon (1) increased production; (2) ability to divert traffic from the Canadian Pacific Railway. While a certain increase in production is to be expected as the country shakes off the post-war depression, fundamentally no great increase can be hoped for until a tide of immigration sets in towards Canada. "How soon the Canadian National Railways will become self-supporting turns largely on what is done in the matter of immigration."⁵ This conclusion certainly does not hold out any promise in the immediate future, whatever it may mean ten years hence.

The possibility of the Canadian National lines diverting any large volume of traffic from the Canadian Pacific Railway is remote. There has already been some improvement in the relative position of the two systems and as the Government enterprise develops its routes and improves its facilities, it will probably make a better showing. However, apart from keener competition, the total effect will not be very large unless the Canadian Pacific drops from its present standard of efficiency.

More effective results will probably be obtained in savings due to the reorganization of traffic and service. A vast reorganization will have to be carried through. This will involve the

determination of the best lines and routes for through traffic, the physical adjustment and coördination of other lines as feeders, the reduction to an inferior status of duplications and of lines that offer no promise of traffic. This should lead to improvements in its operating schedules, reductions in staff and better train hauls.

This process seems to be in progress at the present time although it has not as yet gone very far. The mileage operated out of Winnipeg affords an example. Here the valuable Canadian Northern branch line system is being coördinated with the fine main line of the Grand Trunk Pacific. When reorganization is completed there should be considerable reduction in operating costs.

ELIMINATION OF DUPLICATIONS

The more difficult problem concerns duplications. Thus, at many points lines are parallel or so related to each other that the development of one route must be at the expense of the other. Obviously, certain portions of the present system must be discarded and other portions reduced to the status of being a branch line or at least local line serving local traffic. For instance, between Edmonton and Yellowhead Pass, there is a duplication of lines where one is all that is required. Beyond the Pass the old Canadian Northern goes to Vancouver and the Grand Trunk Pacific to Prince Rupert. "The Port of Prince Rupert is suited for a large ocean traffic which is non-existent."⁶ Both lines cannot be kept up to a high standard if the existing volume of traffic be considered.

The Hudson's Bay route is incomplete. The economic possibilities of this ill-starred project have never been

⁵ Minority Report, Royal Commission to Enquire into Railways and Transportation, 1917. P. xcvi.

⁶ Sir Henry Thornton.

competently investigated and reported upon. At present expenditure upon it is a speculative gamble of the wildest kind. If the chairman of the national lines holds to an economic administration of the system he can hardly fail to jettison this project or relegate it to the distant future.

Again, between Port Arthur and Eastern Canada, there are both the National Transcontinental and the Canadian Northern lines, although there is not sufficient traffic to utilize adequately and economically more than one route. Between Cochrane and the city of Quebec the best that can be hoped for is that the National Transcontinental should be used in the most capable manner to encourage settlement and to promote development. This means, however, that at present the idea of making this a great through route must be abandoned. As a colonization branch of the system it always will be available to relieve the pressure when a peak load develops on the alternative route.

CERTAIN PORTIONS MUST BE SCRAPPED

In brief, the new chairman is provided with 22,000 miles of line out of which to build up a working system. If he handles it purely as a business proposition, he will discard a portion absolutely and relegate about 2,500 miles of what is now main line to colonization standards of equipment, maintenance and service. With a system lopped of its worst excrescences, he will then be in a position to concentrate on the balance and there is no doubt that careful handling will show economies. The national system is well supplied with good through routes. It has an admirable system of feeders both on the prairie and in Ontario. It will certainly be in a position to offer effective competition to the Canadian Pacific Railway.

The burden of charges is too great, however, to expect that the drain on the purse of the taxpayer will be stopped quickly. To expect that to be accomplished would be to ask more of the system than it could hope to achieve if its present status were that of a private company. The fact that Canada was guarantor of the bonds of the defunct companies made it impossible to scale down charges with the same rigor that would necessarily have been employed in a sound ordinary railway reorganization. This is a fact to be kept in mind in judging the performance of the new system as the fruits of its reorganization appear.

There remains to consider the forces that stand in the way of administering the National Railways as though they were privately owned. The dangers are political interference, the pull of sectional interest, and the public pressure for low rates. Sectional ambitions and public clamor for low rates have a way of getting into the political field so that ultimately it all comes down to a question of the degree that politics will be allowed to interfere with the working of the road.

The board that has been appointed to support the chairman, as far as can be judged, is not a strong skilled board composed of men of recognized outstanding ability with some knowledge of the field of transportation. This may have its advantages in that it will tend to allow the chairman a freer hand. Per contra it must be observed that it throws the burden upon his shoulders. Moreover, it is a bad omen that the leader of the opposition in the federal house already on the political hustings has animadverted upon the chairman. It is evident that the board will do its work in the full glare of party politics. However, there is such a general wish among the taxpayers of the country to see the system managed

well, that it is not likely that attempted political filibustering will be successful unless manifest inefficiency develops. Only time will show if the new board will permit political manipulations by the party in power. History is not encouraging.

A SERIOUS OBSTACLE

A more serious obstacle to a business administration of the system lies in the force of sectional interests. There are several problems of major importance where decisions unwelcome to sectional ambitions will arouse a storm of protest with strong political reactions. There is quite a body of public opinion in the western provinces favorable to the completion of the Hudson's Bay route, although as already pointed out this venture is in the nature of a gamble. Nevertheless, if this project is laid aside it will certainly be construed on the prairies as evidence that the board appointed by the present Government is callous and unsympathetic to western interests and aspirations.

The city of Quebec desires that the old National Transcontinental line be developed and become the main route for transcontinental traffic. This would expand the commerce of this port which has been eclipsed by the port of Montreal. Such a policy would probably not yield economic returns to the railway for many years, and in so far as it was successful it would be injuring a more efficient route.

The Intercolonial Railway has already suffered from political manipulation. Already the attempt to integrate it into the national system and bring

it under strict business management has provoked sectional bi-partisan protests. If the policy is pursued of putting it on a parity with the remainder of the system there will undoubtedly be intense dissatisfaction in the Maritime Provinces.

In addition to problems of this nature with their political reflexes which beset the board, it will face a continual agitation for new stations, new lines, etc., backed up by political pressure. These demands are pressed far more keenly and arouse far more antagonism in the case of a government board than of a private corporation.

The demand for lower rates always faces a railway executive and in many instances it is difficult for the administration of a road to show that reductions are not economically justified. It is doubtful, however, if this demand will be as dangerous an element in the situation as others already mentioned since the influence of the Canadian Pacific Railway will count and besides the Board of Railway Commissioners is the arbiter of rates. The latter should perform an increasingly valuable function in standing between the public and the railways.

In general, one may conclude that if the Canadian National Railways are administered purely as a business proposition there is a long and arduous struggle in prospect before they succeed in meeting the very heavy annual charges arising out of bond guarantees. If, in addition, political interference and sectional interests are allowed to hamper the operations of the line, the task is well-nigh hopeless.

Canadian Banking

By SIR EDMUND WALKER, C.V.O., LL.D., D.C.L.

President of The Canadian Bank of Commerce

IN common with other social developments, modern banking is mainly the result of heredity and environment, and not of arbitrary legislation or the general admission in any wide degree of settled principles in the practice of banking. The student endeavoring to understand the science of banking, or seeking to discover some body of principles underlying the practice of banking throughout the world, is confused by the radical differences between the conditions surrounding each of these systems. We can, however, distinguish two classes of banking: first, that which has been influenced by a compromise between the necessities of the government, arising from war or extravagance, and the commercial requirements of the nation; and secondly, that happier condition where the lawmaker and the banker have been mainly concerned to give the people the best instrument in aid of commerce that they could devise. Scotland and Canada seem to be instances of this latter class. But in Canada, as elsewhere, the attempt to systematize has been influenced by public opinion based on past history which has demanded consideration. In the history of banking, Canada is not, as might be supposed, one of the new countries of the world.

EARLY DAYS

In the early days of banking in Canada a lesson was learned which it is well to recall to those who today desire to mix land banking with commercial banking. When the Bank of Upper Canada failed it was said to have owned land in every county in Upper

Canada. The condition of the province at this time made this only too probable, because there was little to show for both public and private debts except slightly improved land and the roads dividing it, and a few towns and villages. Further, because of the danger in every new land settlement in North America of locking up assets in land, a clear division between the two kinds of banking in the form of a prohibition to make loans on real estate, was introduced by Alexander Hamilton in the charter of the first Bank of the United States, which was followed in the articles of association of the Montreal Bank (the Bank of Montreal), and was later laid down as a requirement by the Imperial Treasury authorities in 1833.

We shall not attempt to follow the course of banking since the inception of the first bank in 1817, but it is necessary to indicate the condition of banking and currency at the time of the confederation of the provinces into the Dominion of Canada in 1867. There were thirty-nine charters, but only twenty-seven banks doing business, now reduced to seventeen. The charters expired at various dates, from 1870 to 1892. In Upper and Lower Canada (old Canada) shareholders were liable for double the amount of their stock, except that there was one bank *en commandité*, the "principal partners" having unlimited personal liability. In most cases notes could be issued equal to the paid-up capital plus specie and government securities held. In old Canada and Nova Scotia, as a rule, total liabilities were restricted to three times, and in New Brunswick, to twice

the amount of the capital. There was also one bank with a royal charter, head office in England, and shareholders not under double liability.

FIRST GENERAL BANK ACT

Under these conditions, and after tentative legislation in 1867 and 1870, the first general Bank Act of the Dominion was passed in 1871 (34 Vict., c.v.). It confirmed the special features in the bank working under a royal charter, and that with "principal partners" personally liable, and it will be understood in any statements hereafter regarding banks as a whole that these institutions¹ are not referred to. As the charters of other banks expired they were renewed under the Dominion Act. The first Act extended all charters for ten years, which practice has been followed thus far. The main revisions have been four in number, and took place in 1880, 1890, 1900 and 1913. Of these, the second and last introduced the most important changes. In addition, there have been occasional amendments, usually of minor importance, between times. The Act now in force is that enacted in 1913, and is known as 3-4 George V, Chapter 9, and it comes up for renewal this year.

NO MONOPOLY

It has been occasionally urged that banking in Canada is a monopoly, and therefore unsuited to the democratic principles of this country. These writers have overlooked the fact that the legislation of Canada, whether in form or not, is in reality as liberal as it can well be. Banking in Canada is not in any sense a monopoly. Whether it can be said to be "free banking" as understood in the United States depends on what is meant by that term. In the United States a certain number

of individuals having complied with certain requirements—more numerous and complicated, by the way, than the Canadian requirements—become thereby an incorporated bank, if we regard the consent of the Comptroller of Currency as a matter of form. In Canada, merely in order to follow the British parliamentary methods, when a certain number of individuals have complied with certain requirements, they are supposed to have applied for a charter, which Parliament theoretically might refuse, but which as a matter of fact would not be refused unless doubt existed as to the *bona fide* character of the proposed bank. Then, as in the United States, on complying with certain other requirements and obtaining the consent of the Treasury Board (performing in this case the same function as the Comptroller of Currency in the United States), the bank is ready for business.

The main difference in the matter of obtaining permission to carry on the business of banking is that in Canada the subscribed capital must be \$500,000, paid up to the extent of one-half, or \$250,000, and this fact must be proved by the temporary deposit of the actual money with the Treasury Department at Ottawa. If it is contended that a monopolistic element is introduced by making the minimum paid-up capital \$250,000, we have only to point to the varying minima of capital in the national banking system of the United States, based upon the population of the city or town where a bank is established. The minimum with us is placed so high because to the power to carry on the business of banking is attached the privilege to open branches and to issue a bank-note currency not secured by special pledge with the Government. In the opinion of many Canadians the minimum is too small. In the history of Canada, as in other new

¹Not now in existence.

countries, the placing of the capital stock of new banks has been accompanied by all sorts of abuses. The so-called "cash" with which a bank has begun business has sometimes turned out to be largely composed of shareholders' notes of hand, or any one of many other devices has been resorted to to make a "brave outside" for the public to look at. No restrictions will altogether prevent the occurrence of some form of deception; but without doubt, the present conditions are most carefully devised in order that it may be reasonably certain that each new bank authorized by Parliament will be an honest business venture. So much for the statement that banking is less "free" in Canada than in the United States. The very term "free banking" is a misnomer; and it is to be hoped that there are many who will agree that a little less of freedom in the ability to create a bank, and a little more knowledge on the part of the people regarding the true function of banking, and its high place in the world of commerce would be for the public good. What we want is the most absolute evidence, when a bank is created, that its projectors are embarking in a *bona fide* venture and have put at risk a sum considerable enough to ensure that fact.

"DOUBLE LIABILITY"

In Canada, as in the United States, shareholders in banks are subject to what is known as "double liability." For the benefit of readers who may not understand the phrase, we will quote the section in full:

"In the event of the property and assets of the bank being insufficient to pay its debts and liabilities, each shareholder of the bank shall be liable for the deficiency to an amount equal to the par value of the shares held by him, in addition to any

amount not paid up on such shares" (Sec. 125).

We can remember when the practical value of this power to call on the shareholders, in the event of the failure of a bank for a second payment to the extent of the subscribed amount of the shares, was doubted by many. Shares were transferred just before failure to men unable to meet such calls and willing to be used in this manner, or shares were found to be held by men of straw who owed a corresponding amount to the bank. Or, again, many of the shareholders were borrowers for amounts far in excess of their holdings in shares, and the failure of the bank precipitated their failure as well, and they were thus unable to pay. Of course there were always some real investors among the shareholders, but the value of the double liability was a very variable and doubtful quantity. These features have not, as we know, all passed away but we have done as much as is possible to guarantee an honest share list and to prevent the shareholder from escaping his liability. Banks are not allowed to lend money on their own or the stock of any other Canadian bank (Sec. 76), and as the minimum paid-up capital of \$250,000 must be deposited with the Finance Department before a bank commences business, this should ensure a *bona fide* capital at the start. All transfers of shares must be accepted by the transferee. No transfers within 60 days before failure avoid the double liability of the transferor, but he may collect, if he can, from the transferee. The fact that the capital is large and that the banks have many branches and a more or less national character, causes the stock to be widely held. In the largest banks the share list numbers from 7,000 to 8,000 names. No legislative checks, or even severe

public scrutiny, will altogether prevent bad banking, but our banking history, since the confederation of the old provinces into the Dominion in 1867, shows that the double liability has been a most substantial asset, and has done much towards enabling liquidated banks to pay in full.

CHARTERS

By Section 4 of the Bank Act the charters of all banks existing at the time of its enactment are extended for ten years, or until July 1, 1923, while the charter of any new bank created during the period expires at the same time. Bankers, as a rule, used to think the period too short, and now that the principles of Canadian banking appear to be firmly settled, that the period might reasonably be extended to twenty years. The arrangement, however, ensures a complete review of the principles underlying the Act, and of the details connected with the working of it, once in ten years. During the session of Parliament preceding the date of the expiry of the charters the system comes under attack from the demagogue, the bank-hater, the honest but inexperienced citizen who writes letters to the press, sometimes the press itself, indeed, against all the kinds of attack to which institutions possessing a franchise granted by the people are subject when they come before the public to answer for their stewardship. But, while resisting the attacks of ignorance, bankers are, of course, called upon to answer such just criticisms as may arise from the existence of defects in the system made evident by the experiences of time. On the whole, the product of each discussion has been a banking Act improved in many respects by the exchange of opinion between the bankers and the public.

CASH RESERVES

When the Government of Canada, shortly after Confederation, gave up all idea of creating a bank of issue or a national currency, it imposed upon the banks the condition that they must carry in their reserves a certain percentage of legal-tender notes of the Dominion (Sec. 60). This is a distinct blot upon the Bank Act; but as the banks carry much more than the percentage required, it probably might now be removed from the Act without causing the Government inconvenience. In its early years, the Dominion had its credit to establish, and was called upon to make expenditures in public works, at a very heavy cost for a new and sparsely settled country, and it was obliged to resort to several financial expedients which with its present high credit would be not only unnecessary but very unwise.

In proposing this feature, the Minister of Finance coupled with it the requirement that banks should hold a minimum cash reserve against all liabilities. This was strenuously objected to by the bankers and was not insisted upon. In the revision of the Act in 1890, the Government again proposed the principle of a minimum reserve, and again the bankers were able by their arguments to demonstrate the unsoundness of such a requirement.

The mere statement of the reserve in cash held by a particular bank, or the average held by the banks of an entire country, conveys little idea as to whether prudence is observed or not. In Canada the average for some years of actual cash held in gold and legal tenders as against all liabilities to the public has been about 10 per cent. But, owing to the system of bank-note issues, very little of this is required for daily use, the tills of bank offices being

filled with the bank's own notes, which do not appear in its statements as cash because they are not in circulation. Practically, the business across the counter, when not transacted with other paper instruments, is served by this till money; the settlements of balances with other banks are made in legal tenders, or by drafts on the chief commercial centers; while the main reserve may be, in the case of small banks, represented by their loans at call or short date on stocks and bonds and by their balances in the hands of correspondents at Montreal, New York and London. In addition to such sources of strength the more important banks have agencies in the United States and England, and the bulk of the capital employed there can be made available without any delay, while practically all can be liquidated, under normal conditions, within a few months at most.

Gold is not used as currency in Canada, and as we have to pay our foreign debts mainly in New York and London, our strength at these points in addition to actual cash is the practical test of our liquid position.

PERCENTAGES OF QUICK ASSETS TO LIABILITIES TO
PUBLIC DECEMBER 31, 1922

Specie and legal tenders...	\$337,678,658	14.38%
Do., and including cheques and notes of other banks, balances due from other banks and call loans out of Canada.....	581,233,509	24.76%
Do., and including invest- ments and call loans in Canada.....	1,205,859,978	51.37%

NOTE ISSUES

To most people, Sections 61 to 75, inclusive, are doubtless the most interesting in the Act. In Canada, we began with the very simple and obvious theory that, without the existence of laws to the contrary, an individual had the right to issue his promise to pay in any form, the only deterrent to the

exercise of such a luxury being the difficulty of inducing anyone to accept it in payment. For a considerable period, the law did not interfere with the exercise of this power, and in collections devoted to historical objects many curious specimens of money issued by private business as well as private banking firms may be found. Indeed, in refusing for such a long time to grant the privilege to an incorporated bank, the first legislature of Lower Canada was, doubtless, moved only by the fear that, because of the express authority of law, the bank might be able to float an undue amount of such money. In the present Act, the mere right, apart from subsequent qualifications, is expressed in a few simple words: "The bank may issue and reissue its notes payable to bearer on demand and intended for circulation." The qualifications accompanying this general power have grown from time to time until we believe that Canada now possesses the best currency medium in the world. The main qualifications are as follows:

1. Bank-note issues must not exceed the aggregate of the unimpaired paid-up capital of a bank and of the amount of gold coin or Dominion notes held for it in the Central Gold Reserve.

2. During the crop moving season, however, a bank may issue additional notes up to 15 per cent of the combined unimpaired paid-up capital and rest or reserve fund, after giving notice to the Minister of Finance of its intention to do so, for which privilege it shall pay interest at such rate, not exceeding 5 per cent per annum, as the Minister may fix.

3. A bank must not issue notes in denominations smaller than five dollars, or for any sum not a multiple of five dollars.

4. No bank shall pledge, assign or hypothecate its notes and no loan made

on such security shall be recoverable from the bank or its assets.

RESTRICTION OF PAPER MONEY

In Canada, as in the United States and elsewhere since the war, the resulting difference in business transactions, after cheques and all other modern instruments of credit have been used, is almost entirely paid in paper money. It is therefore of the greatest importance that the amount of this paper money existing at any one time shall be as nearly as possible just sufficient for the purpose. That is, that there shall be a power to issue such money when it is required, and also a power to force it back for redemption when it is not required.

It may therefore, we think, be safely asserted, first, that there should be as complete a relation as possible between the currency requirements of trade and whatever are the causes which bring about the issue of paper money; and secondly, as it is quite as necessary that no over-issue should be possible as that the supply of currency should be adequate, there should be a similar relation between the requirements of trade and the causes which *force notes back* for redemption.

DAILY REDEMPTION

No bank dares to issue notes without reference to its power to redeem any more than a solvent merchant dares to give promissory notes without reference to his ability to pay. The presentation for actual redemption of every note not required for purposes of trade is assured by the fact that every bank seeks by the activity of its own business to keep out its own notes, and therefore sends back daily for redemption the notes of all other banks. This great feature in the Canadian system is generally overlooked, but it is because of this actual daily redemption

that there has never been any serious inflation of the currency. Trade, of course, becomes inflated, and the currency will follow trade, but that is a very different thing from the existence in a country of a great volume of paper money not required by trade. In the older countries of the world it may be sufficient if the volume of currency rises and falls with the general course of trade over a series of years, and without reference to the fluctuations within the twelve months of the year. In North America it is not enough that the volume of currency should rise and fall from year to year. In Canada we find that between the low average of the circulation during about eight months of each year and the maximum attained at the busiest period of the autumn and winter there is a wide difference, the movement upward in the autumn and downward in the spring being so sudden, that without the power in the banks to issue, serious stringency must result in the autumn, and without the force which brings about redemption in the spring, there must be plethora. As a matter of fact it works automatically, and there is always enough and never too much.

Since 1880 note issues have been a prior lien upon the estate of a bank, prior even to a debt due to the Crown. This legislation was prompted by the failure of a small bank in 1879, which did not pay its notes in full. The bankers had urged such legislation in 1869, and if they had succeeded in obtaining it then, we should be able to say today that, without further security than this prior lien on all assets, note issues had always been paid in full, no matter how bad the failure of the issuing bank.

SOME DEFECTS REMOVED

At the revision of the Act in 1890 it was recognized that there were still two

minor though serious defects in the system. It was frequently alleged by those who admired the National Bank Act of the United States, that while the currency created by it might not be elastic, the notes could not for any reason fail to be paid in full, or to circulate without discount throughout the entire area of the United States, while in Canada no similar boast could be made. The area of Canada is enormous relatively to population, and the notes of banks in one province certainly passed at a discount in some of the others, a recurrence in a less aggravated form of a defect in the old State-bank issues of the United States. And, while it might be confidently asserted that all bank issues secured by being a first lien on the estate of the banks would eventually be paid in full, it was nevertheless true that, because of doubt and delay, the notes of a suspended bank might fall to a discount for the time being. To meet these two defects, the bankers at this time proposed the following new features which were adopted by the Government:

1. To avoid discount at the moment of suspension of a bank, either because of delay in the payment of the note issue by the liquidator, or of doubt as to ultimate payment, each bank is obliged to keep in the hands of the Government a deposit equal to 5 per cent on its average circulation, the average being taken from the maximum circulation of each bank in each month of the year. This is called the Bank Circulation Redemption Fund, and should any liquidator fail to redeem the notes of a failed bank, recourse may be had to the entire fund if necessary. As a matter of fact, liquidators are almost invariably able to redeem the note issues as they are presented, but, in order that all solvent banks may accept without loss the

notes of an insolvent bank, these notes bear 5 per cent interest from the date of suspension to the date of the liquidator's announcement that he is ready to redeem.

2. To avoid discount for geographical reasons, each bank is obliged to arrange for the redemption of its notes in certain named commercial centers throughout the Dominion.

Both of these reforms were suggested by the writer, but, like many other features in our Act, they were prompted by the experience of the United States in the period preceding the National Banking System. That our bank-notes are abundantly secured, so far as the public is concerned, seems evident from the fact that a note circulation at December 31, 1922, of \$176,201,351 was in effect secured by a prior lien on total assets of \$2,618,638,104, to which must be added the double liability of the shareholders on the capital stock of the banks, making a total of \$2,743,930,038. That the banks are not likely ever to lose a dollar by the system of guaranteeing each other's notes seems quite clear. Daily redemption and other features in the Act make it difficult to create a forced circulation and, although we have had several fraudulent bank failures, there has never been a case where the assets on which we had the first claim did not easily protect us.

FLEXIBILITY OF CURRENCY

In the last revision of the Act the Central Gold Reserve was established and banks were authorized to enlarge their note issues to the extent of the "amount of current gold coin and of Dominion notes held for the bank in the Central Gold Reserves."

In earlier days when the average capital of each bank was small, we could count upon the necessity of an increased issue of a bank's notes, which

always bear a clear relation to the volume of its business, being met by increasing correspondingly the paid-up capital. But as the average capital of the banks increased, and the average dividend did also, and the length of time of each issue of a note lessened by the improvement of transportation, and taxation grew, banks were much less willing to take on new capital for the value of the note issuing privilege alone. They, however, fully realized their obligation to provide the currency necessary for the business of the country, and thus the arrangement under which they can issue against gold or Dominion notes deposited with the trustees of the Central Gold Reserve was authorized.

In Canada gold is not used as a currency, but as a bank reserve. Of the legal tenders issued by the Government, over seven-eighths are held as bank reserves, while the remainder are the change-making notes—that is, those smaller than five dollars. So that the business of the country, apart from cheques and other credit instruments, is done with bank-notes, and small legal tenders. As Canada is a country with wide fluctuations in the volume of business during the year, owing to crop moving and to the great variation in the seasons, great flexibility of the currency is needed. The following figures illustrate the range of the bank-note circulation during each of the last five pre-war years:

	LOWEST	HIGHEST	PERCENT- AGE OF DIFFER- ENCE
1900....	\$65,819,067	\$89,633,549	36.2
1910....	73,378,676	95,992,866	30.8
1911....	77,110,971	105,855,021	37.3
1912....	88,065,521	115,473,098	31.1
1913....	94,575,644	119,497,321	26.4

The degree in which the bank-note circulation has met the expanding and subsequent contracting needs of business in general during the last few years is shown by the following table:

	LOWEST	HIGHEST	PERCENT- AGE OF DIFFER- ENCE
1918....	\$171,674,464	\$234,982,978	36.9
1919....	203,424,472	237,547,162	16.7
1920....	216,691,916	249,165,707	15.0
1921....	181,953,001	207,417,917	14.0
1922....	155,652,145	178,623,690	14.7

The following figures of our total bank-note issues over a series of years afford an illustration of the growth of Canada:

DATE	AMOUNT
Dec. 31st, 1867.....	\$8,851,451
Dec. 31st, 1870.....	18,526,212
Dec. 31st, 1880.....	27,328,358
Dec. 31st, 1890.....	35,006,274
Dec. 31st, 1900.....	50,758,246
Dec. 31st, 1920.....	228,758,587
Dec. 31st, 1922.....	176,201,351

SOME MISCONCEPTIONS DISPELLED

There are various misconceptions about the power of note issue granted to the banks, which it seems desirable to dispel. Many think that the money lent by a bank comes largely from its note issue, and upon the notion that each dollar of note issue is thus lent, build up a vast imaginary profit. The money lent by one of the larger banks comes from its deposits, its share capital and rest fund, and its note issue in the proportion of 86 cents from deposits, 8 cents from shareholders' funds, and 6 cents from note issue, for each dollar lent.

In early days, when money was

always scarce and roads and all transportation difficult, the note issue was much more valuable to a bank than it is now. Today the larger banks hold more actual cash than their note issues and paid-up capital combined. One of the most important elements in the note issue is that it enables hundreds of branches to be opened because the till money required can be so supplied. Without the saving of the interest which would otherwise be a charge on such branches, they could not exist. The public have very little idea of the cost of printing and keeping a note issue clean, to which is added a Dominion tax of 1 per cent, the entire cost of maintaining the Central Gold Reserve fund, and the interest (at present, 5 per cent per annum) on all emergency notes. Nor do the public realize that this cost of printing and keeping clean applies just as heavily to the notes secured by the Central Gold Reserve fund and the emergency notes for which we pay interest, on both of which there is therefore no profit, as on the issues against our unimpaired capital on which we pay no interest but a tax of 1 per cent per annum. The proportion of circulation on which there is a profit as compared with the proportion on which there is a loss, as at December 31, 1922, was 71 per cent for the former and 29 per cent for the latter.

THE DEPOSITOR

Under our banking laws, as is very properly the case, the claim of the note holder is preferred to that of the depositor in the event of a bank getting into difficulties.

We must not expect that any government will relieve a depositor from the necessity of using discretion as to where he places his money. Governments never have done and never can do that. Men must use their intel-

ligence, and after measuring the security offered, judge where they should intrust their money. It is perhaps easier for a man with limited intelligence to make a selection if the banks have large capital and are of semi-national importance, provided, of course, the basis of the system is not unsound. In Canada, we do not obtain deposits from abroad, although we might not object to do so if money could be obtained at low enough rates of interest; and we do not lend on real estate. There are probably few countries in the world where greater security is offered to depositors.

When the bank charters were under discussion in 1890, the writer had occasion to make publicly a statement which might now excite more criticism than it did then. In making a comparison between individual banks with small capital and banks with branches and large capital, it was urged that "the probability of loss to the depositors in one bank with several millions of capital is less than the probability of loss to some of the depositors in ten or twenty small banks having in the aggregate the same capital and deposits as the large bank."

The retort will be quickly made, "But if the large bank fails, the ruin will be just so much the more widespread."

This is quite true, but it is not an answer to the point, although it may appear to be so. If the conditions of two countries are about the same, and the ability of the bankers and the principles of the banking system are in other respects equally excellent, it must still remain true that the probability of loss to some of the depositors in the ten or twenty small banks is greater than the probability of loss to any of the depositors in the one large bank.

THE BORROWER

In the banking systems of older countries, the borrower is not often considered. Men must borrow where and how they can, and pay as much or as little for the money as circumstances require. We believe too strongly in the necessity for an absolute performance of engagements to think it necessary that any banking system should render the path of the debtor easy. But in America the debtor class is apt to make itself heard, and the writer wishes to show what Canadian banking and the branch system do for the worthy borrower.

In a country where the money accumulated each year by the people's savings does not exceed the money required for new business ventures, it is plain that that system of banking is the best which most completely gathers up these savings and places them at the disposal of the borrower. This practically means that the savings of slow-going communities are applied to other communities where the enterprise is out of proportion to the money at their own command. In Canada we see the deposits of the saving communities applied directly to the country's new enterprises in a manner nearly perfect. One bank borrows money from depositors at Halifax and many points in the Maritime Provinces, where the savings exceed the new enterprises, and it lends money in the West, where the new enterprises far exceed the savings. Another in the same manner gathers deposits in the unenterprising parts of Ontario, and lends the money in the enterprising localities of the same. The result is that many hundreds of business centers, in no case having an exact equilibrium of deposits and loans, are able to adjust the excess or deficiency of capital, the depositor obtaining a fair rate of interest,

and the borrower obtaining money at a lower rate than borrowers in cities or towns of relative size in most parts of the outlying British Empire and of the United States, except in the great centers of international finance.

We believe that it should be the object of every country so to distribute loanable capital that every borrower with adequate security can be reached by someone able to lend, and the machinery for doing this has always been recognized in the banks. That is surely not a good system of banking under which the surplus money in every unenterprising community has a tendency to stay there, while the surplus money required by an enterprising community has to be sought at a distance. If by paying a higher rate of interest, and seeking diligently, it could always be found, the position would not be so bad. The fact is that when it is most wanted, distrust is at its height, and the cautious banker buttons up his pocket. When there is no inducement to avert trouble to a community by supplying its wants in time of financial stress, there is no inclination to do so. Banks with small capital and no branches are not apt to have a very large sense of responsibility for the welfare of the country as a whole, or for any considerable portion of it. But the banks in Canada with many hundreds of branches, with interests which it is no exaggeration to describe as national, cannot be idle or indifferent in time of trouble, cannot turn a deaf ear to the legitimate wants of the farmer in the Prairie Provinces, any more than to the wealthy merchant or manufacturer in the East. Their business is to gather up the wealth of a nation, not of a town or city, and to supply the borrowing wants of a nation.

There are few countries in the world so well supplied with banking facilities

as Canada. The branch system not only enables every town of 1,000 or 1,200 people to have a joint-stock bank, but to have a bank with a power behind it vastly greater than a bank would have such as is found in towns of similar size in the United States.

THE BRANCH SYSTEM

Although the number of establishments was very few, branch banking began soon after the first banks were created in 1817. For sixty or seventy years few banks had more than twenty-five or thirty offices, and we notice that in writing in 1897 the leading banks were referred to as having forty to fifty branches. Since then the development of Canada, and especially of the West, has greatly changed conditions. At December 31, 1922, the seventeen chartered banks of Canada had about 4,671 branches, 4,472 of which are in Canada.

The most striking feature is, of course, not the number of branches belonging to any one bank, because in Great Britain our figures would look quite moderate, but the great area over which these branches are spread and the variety in the circumstances surrounding the banking business at the important points. Indeed, there are few things connected with the life of Canada that the banker can afford to leave unstudied, and it naturally follows that a bank with an army of trained observers and a well-organized system for the inter-communication of information other than the facts which must appear in bank returns and ordinary correspondence, is likely to have an advantage over those less well informed.

BANK FAILURES

From time to time bank failures take place in Canada, accompanied by evidence of reckless bad management

and sometimes of great dishonesty. In times of unusual inflation several new banks are usually created. As a charter can be obtained by any set of individuals upon compliance with certain express provisions in the Bank Act, men with more energy as promoters than skill in administering a bank, now and again appear in the banking world with the necessary permission to issue notes and to do a banking business. In each case as already pointed out, a deposit of \$250,000 in cash must be made with the Finance Minister, accompanied by a declaration under oath that this represents actual payments by shareholders on account of shares subscribed and that subscriptions have been obtained to the extent of \$500,000, and when the permission to do business has been granted by the Finance Minister the cash deposit of \$250,000 is returned to the bank. In the case of a bank that failed some years ago it transpired that the \$250,000 had been in part borrowed, and that the declaration made as to actual shares being subscribed to the required amount was false. We may as well admit that in a democratic country like Canada we can never expect to prevent the creation of new banks merely because the promoters are without experience in banking or have not established their reputation as honorable men; and as long as people will listen to mere promises of dividends, and will subscribe readily for shares in new banks without knowing anything about the management, the Government cannot afford such shareholders much protection.

THE CANADIAN BANKERS' ASSOCIATION

We occasionally see statements in the public press indicating a belief that the Canadian Bankers' Association is a combination used for purposes adverse to the general interests of the

public and it seems necessary to set forth its history so as to controvert such an unjust charge. At the revision of the Bank Act in 1890 it became clear that if the bankers were to do their duty not merely at these decennial revisions but from time to time as conferences by the representatives of all the banks became necessary, they must create an association similar to those in Great Britain and in the United States. In January, 1891, eighteen banks desired to create such a body and after considerable discussion a voluntary organization known as the Canadian Bankers' Association was established. It declared its purposes to be to watch legislation and court decisions relating to banking, to protect the interests of the contributors to the Bank Circulation Redemption Fund, and generally to guard the interests of the chartered banks; also to promote the education and efficiency of bank officers by various means. In the third year of the Association, its Journal, now well known, issued its first number.

Because of the mutual interest involved in the Bank Circulation Redemption Fund, and of certain duties in that connection imposed upon the Association, it became necessary to create by Act of Parliament an Association to replace the voluntary body and this was done in 1900 (c. 93, Dominion Statutes). In this Act the objects and powers of the Association are (1) to promote the interests and efficiency of banks and bank officers, etc.; (2) to establish sub-sections of the Association; (3) to establish clearing-houses for banks, by-laws regarding which require the consent of the Treasury Board. More serious powers were those imposed by the Bank Act. When the banks undertook to guarantee the note issue of every bank they found that they needed the power to inspect

the note issue records of each bank and some protection at the moment of the suspension of a bank. For these purposes the Bank Act gives the Association power (1) to appoint a curator to supervise the affairs of any bank which may suspend payment, until the resumption of its business or the appointment of a liquidator; (2) to supervise the issue of bank-notes, including the making, delivery and destruction of the notes, and the inspection of the circulation accounts of the banks; (3) the custody and management of the Central Gold Reserves; (4) to impose penalties for the breach or non-observance of any by-law, rule or regulation made by virtue of the section of the Act in question, all such by-laws, rules and regulations being subject to the approval of the Treasury Board. The very necessary and clearly defined powers and objects of the Association have been used for the benefit of good banking and the record of the Association is entirely to its credit.

THE FINANCE ACT

Little if anything in the financial history of Canada is more creditable than the Finance Act of 1914. The bankers in response to the call of the Finance Minister, met him in Ottawa on the 3rd of August, and the discussion resulted in the issue that night of the Order-in-Council which the Finance Act was passed to confirm. The Act is intended to meet an emergency arising from "war, invasion, riot or insurrection, real or apprehended, and in case of any *real or apprehended financial crisis*," and as it operates by proclamation in whole or in part, there seems to be no objection to the Act remaining on the statute book.

The Act authorized: (1) the Minister of Finance to make advances to the banks in the form of Dominion notes,

against securities satisfactory to the Treasury Board. (2) It authorized the banks to pay their debts in their own notes provided such notes were not issued in excess of the bank's authority under the Bank and the Finance Acts. (3) It made more elastic the use of emergency circulation already permitted by the Bank Act. (4) It suspended the redemption in gold of Dominion notes, and (5) it made a general moratorium possible at any time by mere proclamation.

The Dominion notes or legal tenders issued during the war, were thus quite different from the fiat money of many countries. They were based upon securities pledged by the borrower, they were used practically only by the banks and became the basis for enlarged issues of bank-notes under the regulations of the Central Gold Reserve. Now that the war is over it can be seen that there was no inflation of the currency as such, but merely that larger use of currency which accompanies an increase in the volume of commodities and of prices; and now that such expansion of trade has disappeared, a contraction of our currency has followed without any disturbance whatever.

A prominent feature of the Finance Act was the power given to the banks to pay all liabilities in their own notes. By many this is supposed to have been a measure entirely in aid of the banks, but its main objects were for the preservation of national finance. Individuals here as in other countries had to be prevented from hoarding gold, and particularly from exporting gold, and if for no other reason the power re-

ferred to had to be given to the banks. But the banks had no power to issue currency except under the Bank and the Finance Acts and when their respective obligations reached the clearing house they had to pay their obligations in Dominion notes or their equivalent. There was no fiat money of the kind issued in some countries to aid the financial position.

The power to proclaim a moratorium was never exercised.

We must hope that a return to a gold basis will not be much longer delayed, but unless something equally valuable takes its place, the power to make advances to the banks should remain in force for the present. We have always to meet the financial effect of the long winter over which we have to carry our cereal products, and the rapid rush beforehand to avoid this, and there are other movements of commodities with somewhat similar difficulties. When the pound sterling was on a gold basis the banks could draw on London against their credit or their securities, and thus find the means to pay foreign debts as against the later arrival in Europe of these products, but just now, they cannot do this without a risk in exchange rates which they could not afford to take. Many, of course, desire to see a bank of re-discount established, but this is a much more difficult and dangerous system unless guarded by restraints not present in recent examples of such banking. Without severe restrictions and a loss of profit to all who require such aid, a system of re-discounts may become the most active instrument of inflation.

Comparative Prices in Canada and the United States

By H. MICHELL, M.A.

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GENERALLY speaking, the course of prices in Canada during the war and post-war period has followed the trend familiar in all other countries, or at least all in which deliberate inflation of currency has not obscured the issue. It is but natural to suppose that two countries such as Canada and the United States, the nearest neighbors, and bound together by the closest commercial ties, would exhibit almost identical price movements; but it is worthy of note that this has not been entirely the case. Indeed, it is safe to say that a closer resemblance may be found in the course of prices in England and Canada than in that of Canada and the United States, a resemblance which has been noted by more than one competent observer.¹ The reason for this similarity between the course of prices in Canada and England is not easy to explain; in fact it may even be without significance and perhaps fortuitous. There are, however, certain general conditions which may be mentioned as giving grounds for this similarity between English and Canadian prices. In the first place, it may be remembered that Canada, as a member of the British Empire, entered the war at the same time as England, and two years and a half before the United States. Actual war conditions were, therefore, prevalent in the first two and not in the third for some considerable time before they were general in all three. *Secondly*, since the war the financial policy of the Federal Reserve Board tended to raise prices in the United States quicker after the decline than

in Canada or England. *Thirdly*, it is possible that the passing of the Fordney Tariff Act has tended to raise prices in the United States and depress them in Canada, more especially in such farm products as enter the United States from Canada, notably wheat. It is probably, however, unsafe to do more than suggest these general possibilities; and indeed, as we have already remarked, the resemblance may only be fortuitous.

COURSE OF WHOLESALE PRICES

Turning now to a more detailed comparison between the course of wholesale prices in the three countries, we are fortunate in having at our disposal the international price indexes of the Federal Reserve Board, which give us not only the prices in the different countries included in their respective currencies, but also converted to a gold basis. It will be noted with interest that Canada reached a strictly gold basis in August, 1922, when the discount on the Canadian dollar in New York funds disappeared. This, of course, means that the comparison in price levels between the two countries is now absolute. The calculations of the Federal Reserve Board disclose the fact that wholesale prices in Canada are now the lowest of any of the five countries included in its surveys,—United States, England, France, Canada and Japan.

GENERAL MOVEMENT OF PRICES IN CANADA

In general it may be said that in Canada, as in the United States, to quote the Federal Reserve Bulletin,

¹ Federal Reserve Bulletin, July, 1922, p. 804.

TABLE I
INTERNATIONAL WHOLESALE PRICE INDEX—FEDERAL RESERVE BOARD

YEAR AND MONTH	BASED ON PRICES IN RESPECTIVE CURRENCIES			* CONVERTED TO GOLD BASIS		
	United States	Canada	England	United States	Canada	England
1913. Average	100	100	100	100	100	100
1919. "	211	207	241	211	199	221
1920. "	239	250	314	239	223	242
1921. "	148	167	201	148	150	159
1921						
September	146	158	194	146	141	148
October	145	149	187	145	136	149
November	145	145	177	145	133	144
December	142	145	172	142	135	147
1922						
January	142	144	170	142	137	148
February	146	149	167	146	145	150
March	147	150	168	147	145	151
April	149	152	167	149	148	151
May	158	154	171	158	152	156
June	161	153	169	161	151	154
July	165	154	171	165	152	156
August	165	149	168	165	149	154
September	164	144	165	164	144	150
October	165	145	163	165	145	148

"prices of finished consumers' goods advanced to a higher post-war peak than raw materials or semi-manufactured goods." This entailed hardships of a very serious nature on the producers of the basic raw materials, farmers in particular. Not only was this so, but the decline in prices brought even greater hardships on them, as will be seen at a glance from table above, in which the relative declines of the raw material, semi-finished and finished products in Canada are compared.

Canada, as being in large measure a producer of basic raw materials, and not having reached the same level of industrial development as the United States or Great Britain, has probably suffered more severely from this uneven

fall in prices as a whole than the other two countries. It may be said, however, that the very real accession of wealth that has come to the Dominion in the last few years has offset in some degree the hardship thus entailed. The conclusion that a country needs all-round development both in agriculture and industry is inevitable; and as Canada advances in industrialization, she will doubtless suffer less from these violent fluctuations in the prices of her agricultural products.

RETAIL PRICES

The general course of retail prices in the countries follows that of wholesale prices and affords some interesting comparisons.

TABLE II

COMMODITY	HIGHEST	NOV., 1922 *	DECLINE
			Per Cent
Wheat, per bushel	\$3.15	1.11	64.7
Flour, patents per bbl.	13.70	7.20	47.4
Bread, per lb. ....	.087	.067	22.9
Beef, live weight, per cwt.	16.50	6.75	59.1
Beef, dressed hindquarters, cwt.	34.00	15.00	55.8
Beef, rib roast prime, lb. ....	.40	.22	45.0
Hogs, live weight, selects, cwt.	23.75	11.25	52.6
Pork, dressed, cwt.	30.00	17.00	43.3
Bacon, dressed, lb. ....	.55	.34	38.2
Hides, green, lb. ....	.40	.11	72.5
Leather, sides, lb. ....	.78	.55	29.5
Boots, men's kip, pair	4.60	4.00	15.0

* End of month.

TABLE III
RETAIL PRICES, FOODS

	CANADA	UNITED STATES
1914. July	100	100
1915	104	98
1916	114	109
1917	157	143
1918	175	164
1919	186	186
1920	227	215
1921	148	145
1922	138	139

Canada, *Labour Gazette*. United States, Bureau of Labor Statistics (recalculated).

It will be noted that prices of foodstuffs rose quicker and more sharply in Canada, but that they have fallen a shade farther. The total advance in Canada was 127 per cent and in the United States 115 per cent, while the decline has been 39 per cent in Canada and 35 per cent in the United States.

FUEL AND LIGHT

Turning now to fuel and light, we find a slightly less violent rise, but a

much less steep decline than in foodstuffs.

TABLE IV
FUEL AND LIGHT

	CANADA	UNITED STATES
1914	100	100
1915	96	100
1916	103	101
1917	131	122
1918	160	152
1919	165	161
1920	213	168
1921	190	178
1922	191	170

Sources: Canada, *Labour Gazette*. United States *Monthly Labor Review*.

Here the advance in Canada was 113 per cent and the decline only 10 per cent, while in the United States the advance was 78 per cent and the decline has only been 5 per cent.

RENT

The item of rent affords a most striking comment upon the undoubted house shortage owing to lack of con-

struction during the war, a shortage that recent building activity has been unable to satisfy.

TABLE V
RENT

	CANADA	UNITED STATES
1914.....	100	100
1915.....	87	99
1916.....	89	99
1917.....	98	103
1918.....	106	112
1919.....	121	127
1920.....	143	137
1921.....	151	153
1922.....	153	156

Sources: *Ibid.*

The sharp decline in Canada immediately after the beginning of the war was undoubtedly due to the absence of great numbers of men on military service when many of their families "doubled up," the big advance coinciding with the coming of peace and the return of the troops.

CLOTHING

The last item, the retail prices of clothing, affords some interesting comparisons. The severe advance, cul-

TABLE VI
CLOTHING

	CANADA	UNITED STATES
1914.....	100.0	100.0
1915.....	113.6	104.1
1916.....	130.3	120.2
1917.....	151.5	149.1
1918.....	180.0	213.8
1919.....	212.9	284.5
1920.....	236.4	294.8
1921.....	151.5	229.8
1922.....	140.9	180.2

Sources: *Ibid.*

minating in 1920, is attributable to the demands made upon the clothing trade for the manufacture of uniforms and the very high prices of wool and cotton, while the decline is attributable to the fall in the price of these two staples. The recent advances in price of both wool and cotton will probably lead to slightly higher prices of clothing in the future.

In this item the advance in Canada was one of 136 per cent and the decline 40 per cent. In the United States the advance was 195 per cent and the decline 40 per cent. It is not easy to explain the greater rise in the United States. Perhaps the silk shirt craze was more pronounced in the former than in the latter.

COST OF LIVING

We may now, by combining the indexes of retail prices of foodstuffs, fuel and light, rent and clothing, arrive at some conclusion as to the relative costs of living in the two countries since 1914. For this purpose it will be necessary for us to weight the various items, which we may do somewhat roughly by assigning 4 to food, 3 to rent, 2 to clothing and 1 to fuel and light. Our final figures for the series will then be as follows:

TABLE VII
COMPARATIVE COST OF LIVING IN CANADA AND UNITED STATES

	CANADA	UNITED STATES
1914.....	100.0	100.0
1915.....	99.9	99.7
1916.....	108.6	107.4
1917.....	135.6	130.1
1918.....	153.8	157.2
1919.....	169.8	185.4
1920.....	202.3	202.9
1921.....	153.8	107.7
1922.....	148.4	155.4

If now we compare the rise and fall of wholesale and retail prices in Canada, the United States and Great Britain, taking the wholesale price index numbers of the Federal Reserve Board for that purpose, we find the following:

post-war preoccupation of all classes. During the war the people were too much occupied with the struggle to notice very much the rapidly rising cost of living. Employment was excellent and wages were rising rapidly; in the munitions services they were at

TABLE VIII

PERCENTAGE RISE AND FALL OF WHOLESALE AND RETAIL PRICES IN CANADA, THE UNITED STATES AND GREAT BRITAIN

	WHOLESALE *		RETAIL †	
	Rise	Fall	Rise	Fall
Canada.....	150	42.4	102	26.7
United States.....	139	40.6	103	23.1
Great Britain.....	214	48.0	178	38.1

* Base 100 = Average prices 1913.

† Base 100 = Average prices 1914.

To come to any definite conclusion with regard to the relative cost of living at the present moment, or at any time during the war period, in the three countries is very difficult, if not entirely impossible.

The term "cost of living" is an elusive one and it is unsafe to draw conclusions. It is not very difficult to draw comparisons of rise and falls, but it is far more difficult to compare our bases. When we say that the average prices in 1914 in the three countries are each equal to 100, we have said nothing whatever as to the actual standard of living that this figure represents. It would probably be quite unsafe to say that the cost of living in Canada today is lower than in the United States. Such problems present innumerable pitfalls for the unwary, and the wise man, cautiously if ingloriously, refrains from definite conclusions.

The great rise and fall of prices in Canada, as elsewhere, has been the

unheard-of levels. But with the peace and the return of great numbers of men to civil life, the boom of 1919 and the swift collapse of 1920, the peoples' attention became engrossed with the problem of the cost of living.

ATTEMPT BY GOVERNMENT FAILS

The general exasperation caused by the continuance of high retail prices led to the appointment, manifestly against the better judgment of the Government, of a Board of Commerce armed with plenary powers to prosecute profiteers. The history of this unhappy venture is too long to enter into here, we may also say too confused, but in a very short time the endeavors of the Board to stop the rise of prices became farcical in the extreme. With great pomp and ceremony a few grocers, caught selling bacon a few cents a pound higher than what the Board considered proper, were prosecuted. Soon dissensions arose among the members of the Board, and they all

resigned amid the laughter of the people. For sometime longer it continued as a kind of disembodied ghost with three government officials as members of the Board, and its last act was to decree a fixed price for sugar in order to protect the refiners who had been caught in the disastrous fall in prices of that commodity. This so incensed the public that the Government was forced to disallow the decision, and the Board of Commerce finally dissolved, while the last act of this tragedy came shortly afterwards when the Privy Council declared the Board

to have been illegally constituted from the beginning. Thus ended Canada's experiment in keeping down the cost of living by government enactment, an experiment not likely ever to be repeated.

The great decline ended at the beginning of 1922, and a slow but steady upward climb began. How far this trend will be carried it is impossible to say, but we are probably safe in supposing that for many years to come the level of prices will be far below those of the great peak of 1920.

The Foreign Trade of Canada

By VICTOR ROSS

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A PECULIARITY of Canadian conditions is the importance of external trade in the national life. To some extent a raw material country which must send her products abroad; to some extent devoid of certain essential articles; to some extent disjointed geographically, so that the parts tend to trade with foreign neighbors instead of with more or less separated fellow-provinces; of recent years vigorous in pushing the sales of her manufactures: in all these cases her commercial operations are prone to extend across her borders. This seems a constant characteristic; at all events it has existed long, has grown with the development of the country, and now has assumed remarkable proportions. With fewer than nine millions of population Canada today has the fourth place in the world in actual volume of exports, and in per capita proportion she comes first, as the accompanying graphs set forth.

ACTUAL VOLUME OF TRADE

The figures for the last three decades show the rapidity of the growth of foreign trade.¹

Population has grown from not quite five millions to not quite nine millions; foreign trade has grown from two hundred millions to figures which fluctuate between two and a half billions (at the peak of war activity in 1918) and a billion and a half at what probably is the lowest point to be realized; and from a little over forty dollars a head to more than four times that proportion—in the war year of 1918 it touched \$300 a head.

In studying this remarkable volume and its rapid growth allowance must be made for the disturbing factor of the war; on the one hand conditions were exceptional and readjustment has been necessary, while on the other hand necessity spurred Canadians to efforts which may be expected to have permanent effects in some departments of trade. To show the sudden swelling and the period of deflation, it will be well to exhibit separately the years immediately preceding the war, the war years, and the succeeding period. First, the three years before the war as shown in first table on the next page.

YEAR	EXPORTS	EXPORTS PER HEAD	IMPORTS	IMPORTS PER HEAD	TOTAL EX- TERNAL TRADE	EXTERNAL TRADE PER HEAD
1891.....	\$88,671,738	\$18.31	\$111,533,954	\$23.02	\$200,205,792	\$41.33
1901.....	177,431,386	32.84	177,930,919	33.13	354,509,143	65.97
1911.....	274,316,553	38.06	452,724,603	62.82	727,041,156	100.88
1921.....	1,189,163,701	135.31	1,240,158,882	141.11	2,429,322,583	276.42
1922.....	740,240,680	80.32	747,804,332	83.39	1,488,045,012	163.71

¹ Statistics given for years subsequent to 1907 are for the fiscal year ending on 31st March. The exports are of Canadian produce; when exports of foreign produce are included the totals are somewhat larger.

YEAR	EXPORTS	EXPORTS PER HEAD	IMPORTS	IMPORTS PER HEAD	TOTAL EX- TERNAL TRADE	EXTERNAL TRADE PER HEAD
1912.....	\$290,223,857	\$39.40	\$522,404,675	\$70.93	\$812,628,532	\$110.33
1913.....	355,754,600	47.26	671,207,234	89.17	1,026,961,834	136.43
1914.....	431,588,439	56.10	619,193,998	80.49	1,050,782,437	136.59

Next the years affected by the struggle:

YEAR	EXPORTS	EXPORTS PER HEAD	IMPORTS	IMPORTS PER HEAD	TOTAL EX- TERNAL TRADE	TOTAL EXTERNAL TRADE PER HEAD
1915.....	\$409,418,836	\$52.07	\$455,955,908	\$57.99	\$865,374,744	\$110.06
1916.....	741,610,638	92.29	508,201,134	63.24	1,249,811,722	155.53
1917.....	1,151,375,768	144.75	846,450,878	103.48	1,997,826,586	247.32
1918.....	1,540,027,788	184.91	963,532,578	115.69	2,503,560,366	300.60
1919.....	1,216,443,806	143.47	919,711,705	108.48	2,136,155,513	251.95

Here we have the initial check, the bound forward to the amazing figures of 1917-18, and the drop due to the ending of hostilities in the third quarter of 1918-19. Finally, the years after the war:

YEAR	EXPORTS	EXPORTS PER HEAD	IMPORTS	IMPORTS PER HEAD	TOTAL EX- TERNAL TRADE	TOTAL EXTERNAL TRADE PER HEAD
1920.....	\$1,239,492,098	\$143.60	\$1,064,528,123	\$123.33	\$2,304,020,221	\$266.93
1921.....	1,189,163,701	135.31	1,240,158,882	141.11	2,429,322,583	276.42
1922.....	740,240,680	80.32	747,804,332	83.39	1,488,045,062	163.71

It may be added that the most recent statistics suggest that external trade once more is on the increase. "Twelve months" figures, those for the fiscal year ending 31st March last being repeated for the sake of comparison, are:

PERIOD	EXPORTS	IMPORTS	TOTAL TRADE
12 mos. ending 31 Mar.....	\$740,240,680	\$747,804,332	\$1,488,045,062
" " " 30 Sept.....	792,796,845	732,904,818	1,525,701,653
" " " 31 Oct.....	815,530,510	740,261,771	1,555,792,281

Thus in the first seven months of the current financial year exports increased by 10 per cent and imports by 1 per cent, the total trade increasing by rather more than 3 per cent. Moreover, the general tendency seems to be towards growth.

Summarizing these tables, we find that in the period immediately preceding the war the foreign trade of Canada rose from eight hundred millions to a billion a year, with a heavy preponderance of imports, which accounted for from three-fifths to two-thirds of the total trade; that during the war foreign trade reached two billions and a half, exports now furnishing some three-fifths of the volume; and that in the post-war period it has shrunk to a billion and a half, but seems inclined to rise, with the two balanced, exports in the most recent returns surpassing imports.

Unquestionably the drop from the magnificent totals of a year or two ago is severe, and has hurt. Production, however, is not so badly reduced as the values would suggest; the official calculation is that, while the falling off in 1922 as compared with 1921 is some 40 per cent, about 25 per cent out of the total decrease is due to declines in prices, and about 15 per cent is caused by lessened quantities.

DISTRIBUTION OF EXPORTS

Such being the volume of the external trade, we may scrutinize its geographical distribution. A highly important characteristic is that more than four-fifths of it is with the two great English-speaking countries, the United Kingdom and the United States. A second characteristic, at all events until the end of the war, was the triangular nature of this trade, Canada selling more heavily to Great Britain and buying more heavily from the United States; the war accentuated this. Speaking broadly, Canada's trade rests upon her exports, large proportionately and large in sheer volume, to Great Britain. As regards exports, the table below sets out conditions in the quarter of a century before the war. Great Britain thus took about half of Canadian exports and the United States 40 per cent or less. At one time, in 1898, the mother country's share rose to 64.4 per cent, that of the United States falling in the same year to 27 per cent. Meanwhile, an increasing share of the imports was obtained by the Americans, and their trade with Canada increased in rather direct ratio to the decline in the proportion of British goods sold to us, and so in 1914 the United States had 64 per cent of the Canadian import trade.

YEAR	TO UNITED KINGDOM	PROPORTION	TO UNITED STATES	PROPORTION	OTHER COUNTRIES	PROPORTION
1891.....	\$43,243,784	48.8 p. c.	\$37,743,430	42.6 p. c.	\$7,684,524	10.6 p. c.
1896.....	62,717,941	57.2 "	37,789,481	34.4 "	9,200,383	8.4 "
1901.....	92,857,525	52.3 "	67,983,673	38.3 "	16,590,188	9.4 "
1906.....	127,456,465	54.1 "	83,546,306	35.5 "	24,481,185	10.4 "
1911.....	132,156,924	48.2 "	104,115,823	38.0 "	38,043,806	13.8 "
1914.....	215,253,969	49.9 "	163,372,825	37.9 "	52,961,645	13.2 "

YEAR	FROM UNITED KINGDOM	PROPORTION	FROM UNITED STATES	PROPORTION	OTHER COUNTRIES	PROPORTION
1891.....	\$42,018,943	37.7 p. c.	\$52,033,477	46.7 p. c.	\$17,481,534	14.6 p. c.
1896.....	32,824,505	31.2 "	53,529,390	50.8 "	19,007,266	18.0 "
1901.....	42,820,334	24.1 "	107,377,906	60.3 "	27,732,679	15.6 "
1906.....	69,183,915	24.4 "	169,256,452	59.6 "	45,299,913	16.0 "
1911.....	109,934,753	24.3 "	275,824,265	60.8 "	66,965,585	14.9 "
1914.....	132,070,406	21.4 "	396,302,138	64.0 "	90,821,454	14.6 "

During the war, as already observed, the proportion of exports going to Great Britain somewhat increased, and the Americans supplied nearly all of the imports purchased by Canada while the proportion purchased from other countries rose from 12 to 18 per cent between 1915 and 1919. First as to exports:

YEAR	TO UNITED KINGDOM	PROPORTION	TO UNITED STATES	PROPORTION	TO OTHER COUNTRIES	PROPORTION
1915.....	\$186,668,554	45.6 p. c.	\$173,320,216	42.3 p. c.	\$49,930,066	12.1 p. c.
1916.....	451,852,399	60.9 "	201,106,488	27.1 "	88,651,751	12.0 "
1917.....	742,147,537	64.5 "	280,616,330	24.4 "	128,611,901	11.1 "
1918.....	845,480,069	54.9 "	417,233,287	27.0 "	277,314,432	18.1 "
1919.....	540,750,977	44.5 "	454,873,170	37.4 "	220,819,659	18.1 "

And next as to imports it will be seen that purchases from Great Britain dwindled steadily during the war years, and that the imports from the United States reached record figures, which found its first reflection in a depreciated currency.

YEAR	IMPORTS FROM THE UNITED KINGDOM	PER CENT	IMPORTS FROM THE UNITED STATES	PER CENT	IMPORTS FROM OTHER COUNTRIES	PER CENT
1915.....	\$90,157,204	19.8	\$297,142,059	65.2	\$68,656,645	15.0
1916.....	77,404,361	15.2	370,880,549	73.0	59,916,224	11.8
1917.....	107,096,735	12.7	665,312,759	78.6	74,041,384	8.7
1918.....	81,324,283	8.4	792,894,957	82.3	89,313,338	9.3
1919.....	73,035,118	8.0	750,203,024	81.6	96,473,563	10.4

The post-war period has seen a partial reversion to earlier conditions, with Great Britain slowly returning to a position of importance as a market for Canadian products, but with "other countries" on the whole maintaining their importance. The export figures are:

YEAR	EXPORTS TO THE UNITED KINGDOM	PER CENT	EXPORTS TO THE UNITED STATES	PER CENT	EXPORTS TO OTHER COUNTRIES	PER CENT
1920.....	\$489,152,637	39.5	\$404,028,183	37.4	\$286,311,278	23.1
1921.....	312,844,871	26.3	542,322,907	45.6	333,995,863	28.1
1922.....	299,361,675	40.4	292,588,643	39.5	148,290,362	20.1

Again we may look at the latest statistics, to see at what trend they hint:

PERIOD	TO UNITED KINGDOM	PROPOR- TION	TO UNITED STATES	PROPOR- TION	TO OTHER COUNTRIES	PROPOR- TION
12 mos. ending 31 Mar.	\$299,361,675	40.4 p. c.	\$292,588,643	39.5 p. c.	\$148,290,362	20.1 p. c.
" " 30 Sept.	311,294,751	39.2 "	322,624,068	40.6 "	158,878,026	20.0 "
" " 31 Oct.	326,370,742	40.0 "	327,037,218	40.1 "	162,122,550	19.9 "

The trend is not particularly noticeable; the figures move upward slowly, the proportions are steady, and if the figures suggest anything, it is that the recovery by Great Britain of her place in Canadian trade is proving a slow process. What is noticeable is the way in which the well-distributed trade to "other countries" holds its proportion.

Turning now to imports in the post-war years, we have:

YEAR	IMPORTS FROM UNITED KINGDOM	PROPORTION	IMPORTS FROM UNITED STATES	PROPORTION	IMPORTS FROM OTHER COUNTRIES	PROPORTION
1920.....	\$126,362,631	11.9 p. c.	\$801,097,318	75.3 p. c.	\$137,068,174	12.8 p. c.
1921.....	213,973,562	17.3 "	856,176,820	69.0 "	170,008,500	13.7 "
1922.....	117,135,343	15.7 "	515,958,196	69.0 "	114,610,793	15.3 "

And to continue the "tendency" figures:

PERIOD	IMPORTS FROM UNITED KINGDOM	PROPOR- TION	IMPORTS FROM UNITED STATES	PROPOR- TION	IMPORTS FROM OTHER COUNTRIES	PROPOR- TION
12 mos. ending 31 Mar.	\$117,135,343	15.7 p. c.	\$515,958,196	69.0 p. c.	\$114,610,743	15.3 p. c.
" " 30 Sept.	127,437,704	17.3 "	492,965,967	67.2 "	112,501,147	14.5 "
" " 31 Oct.	131,701,079	17.7 "	493,610,038	66.6 "	114,950,654	15.7 "

Attention may be drawn to the increase in exports to "other countries," rising from sixteen millions at the beginning of the century to more than fifty millions in the year before the war, and to about one hundred and fifty millions in the deflation year of 1922. Imports from them also have increased, from less than thirty millions in 1901 to ninety millions in 1914 and to \$114,000,000 in 1922. As already remarked, this amounts to about a fifth of Canadian trade; even this proportion is rather a new thing, as the tables for pre-war trade exhibit. The increase is gratifying to Canadians, whose governments have striven for years to open new markets. In 1922 the commerce with continental Europe was \$102,600,000; that with the West Indies and the Guianas (a trade which has been especially cultivated) was nearly \$50,000,000; that with the Orient was nearly \$30,000,000; and that with South America, excluding the Guianas, was \$28,500,000. Going more into detail regarding these secondary streams of traffic, the total trade in 1922 exceeded ten millions in the case of the following countries:

Japan.....	\$23,023,000
France.....	21,676,000
Italy.....	16,723,000
Belgium.....	16,177,000
Netherlands.....	13,585,000
Australia.....	11,719,000
Newfoundland.....	10,705,000

It exceeded five millions in the case of the following:

Switzerland.....	\$8,017,000
Peru.....	7,055,000
India.....	6,917,000
Germany.....	6,516,000
Greece.....	6,281,000
New Zealand.....	5,912,000
Argentina.....	5,588,000

In most of these, exports heavily outweigh imports; France, Switzerland and India are exceptions. Trade with British Africa, at present depressed, in the three years before the war ranged from ten to fifteen millions.

PRINCIPAL COMMODITIES EXPORTED

Turning now to the principal sorts of articles sold by Canada, the following is the analysis of the exports of 1921 and 1922 according to the new classification, supplied by the Dominion Bureau of Statistics:

I. RAW MATERIALS

YEAR	TO THE UNITED KINGDOM	TO THE UNITED STATES	TO OTHER COUNTRIES	TOTAL
1921.....	\$118,081,103	\$237,159,548	\$170,536,973	\$525,767,724
1922.....	163,289,002	108,414,084	57,767,856	329,370,942

II. PARTLY MANUFACTURED ARTICLES

YEAR	TO THE UNITED KINGDOM	TO THE UNITED STATES	TO OTHER COUNTRIES	TOTAL
1921.....	\$44,378,927	\$131,826,610	\$20,758,280	\$196,963,817
1922.....	20,125,161	72,704,547	14,397,856	107,227,564

III. FULLY OR CHIEFLY MANUFACTURED ARTICLES

YEAR	TO THE UNITED KINGDOM	TO THE UNITED STATES	TO OTHER COUNTRIES	TOTAL
1921.....	\$150,384,841	\$173,336,809	\$142,710,610	\$466,432,260
1922.....	115,947,512	111,470,012	76,224,650	303,642,174

Thus in both years over 40 per cent of Canadian exports were raw materials, about 40 per cent were manufactured articles, and the remainder, about one-sixth, were partly manufactured. Despite the heavy decline in trade, the proportions of

the three categories remained fairly constant.

The Bureau of Statistics further separates exports into nine categories. We now may study the course of the export trade in these categories in the three years since the war:

VEGETABLE PRODUCTS (EXCEPT CHEMICALS, FIBRES AND WOOD)

YEAR	TO THE UNITED KINGDOM	TO THE UNITED STATES	TO OTHER COUNTRIES	TOTAL EXPORTS
1920.....	\$249,409,394	\$55,735,692	\$110,675,049	\$415,820,135
1921.....	141,169,556	146,539,883	194,431,005	482,140,444
1922.....	196,199,365	47,587,209	73,792,389	317,578,963

ANIMALS AND THEIR PRODUCTS (EXCEPT CHEMICALS AND FIBRES)

YEAR	TO THE UNITED KINGDOM	TO THE UNITED STATES	TO OTHER COUNTRIES	TOTAL EXPORTS
1920.....	\$138,885,994	\$130,997,017	\$44,134,933	\$314,017,944
1921.....	91,291,301	75,751,046	21,317,690	188,359,937
1922.....	70,368,963	48,391,355	17,088,402	135,798,720

FIBRES, TEXTILES AND TEXTILE PRODUCTS

YEAR	TO THE UNITED KINGDOM	TO THE UNITED STATES	TO OTHER COUNTRIES	TOTAL EXPORTS
1920.....	\$3,851,357	\$12,472,456	\$17,704,501	\$34,028,314
1921.....	2,643,202	7,122,882	9,017,800	18,783,884
1922.....	1,020,612	1,996,634	1,568,741	4,585,987

WOOD, WOOD PRODUCTS, AND PAPER

YEAR	TO THE UNITED KINGDOM	TO THE UNITED STATES	TO OTHER COUNTRIES	TOTAL EXPORTS
1920.....	\$42,026,282	\$153,686,140	\$18,201,522	\$213,913,944
1921.....	36,761,384	216,011,556	31,788,538	284,561,478
1922.....	15,664,295	148,065,672	16,195,920	179,925,887

IRON AND ITS PRODUCTS

YEAR	TO UNITED KINGDOM	TO UNITED STATES	TO OTHER COUNTRIES	TOTAL EXPORTS
1920.....	\$15,874,157	25,717,121	\$40,194,551	\$81,785,829
1921.....	17,653,826	19,630,413	39,216,502	76,500,721
1922.....	4,758,888	4,693,020	18,860,364	28,312,272

NON-FERROUS METALS AND THEIR PRODUCTS

YEAR	TO UNITED KINGDOM	TO UNITED STATES	TO OTHER COUNTRIES	TOTAL EXPORTS
1920.....	\$9,260,569	\$37,545,943	\$8,169,901	\$54,976,413
1921.....	9,873,516	30,029,799	6,036,062	45,939,377
1922.....	5,997,576	14,687,260	7,201,160	27,885,996

NON-METALLIC MINERALS AND THEIR PRODUCTS

YEAR	TO UNITED KINGDOM	TO UNITED STATES	TO OTHER COUNTRIES	TOTAL EXPORTS
1920.....	\$3,121,157	\$17,488,266	\$9,733,503	\$30,342,926
1921.....	3,127,338	22,270,447	14,724,107	40,121,892
1922.....	3,253,427	12,605,032	6,758,225	22,616,684

CHEMICALS AND ALLIED PRODUCTS

YEAR	TO UNITED KINGDOM	TO UNITED STATES	TO OTHER COUNTRIES	TOTAL EXPORTS
1920.....	\$3,894,732	\$13,803,067	\$5,185,886	\$22,883,685
1921.....	3,399,815	12,236,087	4,730,377	20,366,279
1922.....	1,062,757	5,937,136	2,506,277	9,506,170

ALL OTHER COMMODITIES

YEAR	TO UNITED KINGDOM	TO UNITED STATES	TO OTHER COUNTRIES	TOTAL EXPORTS
1920.....	\$22,828,995	\$16,582,481	\$32,311,432	\$71,722,908
1921.....	6,924,933	12,730,854	12,733,882	32,389,669
1922.....	1,035,792	8,625,325	4,368,884	14,030,001

Analysis shows that three of these categories accounted for about four-fifths of the exports:

in 1922 the quantity sent abroad exceeded by seven million bushels the exportation of 1921, and yet the value

ARTICLE	1920	1921	1922
Vegetable products	35.5 p. c.	40.6 p. c.	42.9 p. c.
Animal products	25.3 "	15.8 "	18.3 "
Wood and paper	17.2 "	23.9 "	24.3 "
	78.0 p. c.	80.3 p. c.	85.5 p. c.

It is to be observed, too, that as deflation proceeded these staples assumed a position of increasing importance.

It may be of interest to give the figures for some of the larger items in the exports:

of the larger quantity was \$131,000,000 less than that of the smaller quantity. The quantity of cheese exported in 1922 was almost exactly equal to that sold abroad in the preceding year, but the decline in value was nearly twelve millions. In bacon and hams an in-

ARTICLE	1920	1921	1922
Wheat.....	\$185,044,806	\$310,952,138	\$179,990,730
Fishery products	40,687,172	33,130,003	29,339,877
Live cattle	44,985,757	21,463,891	18,265,966
Meats.....	96,161,234	44,501,520	29,826,541
Paper.....	63,253,419	92,103,307	69,523,418
Logs and sawmill products	105,353,420	115,684,475	70,790,996

Some of the foregoing cases illustrate the effect which prices have upon the figures. The reduction in the money-value of the wheat exports was altogether due to the halving of the prices;

crease of nearly a million pounds was coupled with a decrease of \$8,000,000. Still more striking is the case of sugar; the quantity exported rose from 65,700,000 pounds to 140,-

800,000, and the value fell from \$11,800,000 to \$10,900,000. Speaking generally, indeed, the quantities of goods exported and imported showed comparatively little decrease.

EXPORTS OF MANUFACTURES

A phase of their export trade in which Canadians take much interest is that relating to manufactures; the exigency of the war and the accompanying demand for munitions caused a great advance in this department of trade, and the desire and aptitudes engendered persist. It was a step, however, in a development which has been in progress for a long time. Originally Canada was almost wholly a raw material country; her exports of manufactures in the three years following Confederation averaged less than two and a half millions, and at the time when the protective movement began were only four millions a year. In the period from 1901 to 1905 they exceeded twenty-one millions a year; in the next quinquenniad they had topped thirty millions. Then the rapid growth began. In the pre-war years the record was:

YEAR	EXPORTS	PROPORTION TO TOTAL EXPORTS
1911.....	\$40,432,526	13.9 p. c.
1912.....	42,508,985	13.8 "
1913.....	52,525,082	13.9 "
1914.....	67,602,238	14.8 "

The war period saw enormous expansion:

1915.....	\$95,068,525
1916.....	250,052,223
1917.....	487,312,766
1918.....	660,840,430
1919.....	571,498,678

Deflation still leaves a heavy export in this category. Exact comparison of the three post-war years cannot be made owing to a change in the method of compiling statistics; but the 1920 exports of manufactures under the old system were \$435,000,000, those of "fully or chiefly manufactured articles" in 1921 under the new classification were \$446,000,000, and in 1922 they were \$303,000,000.

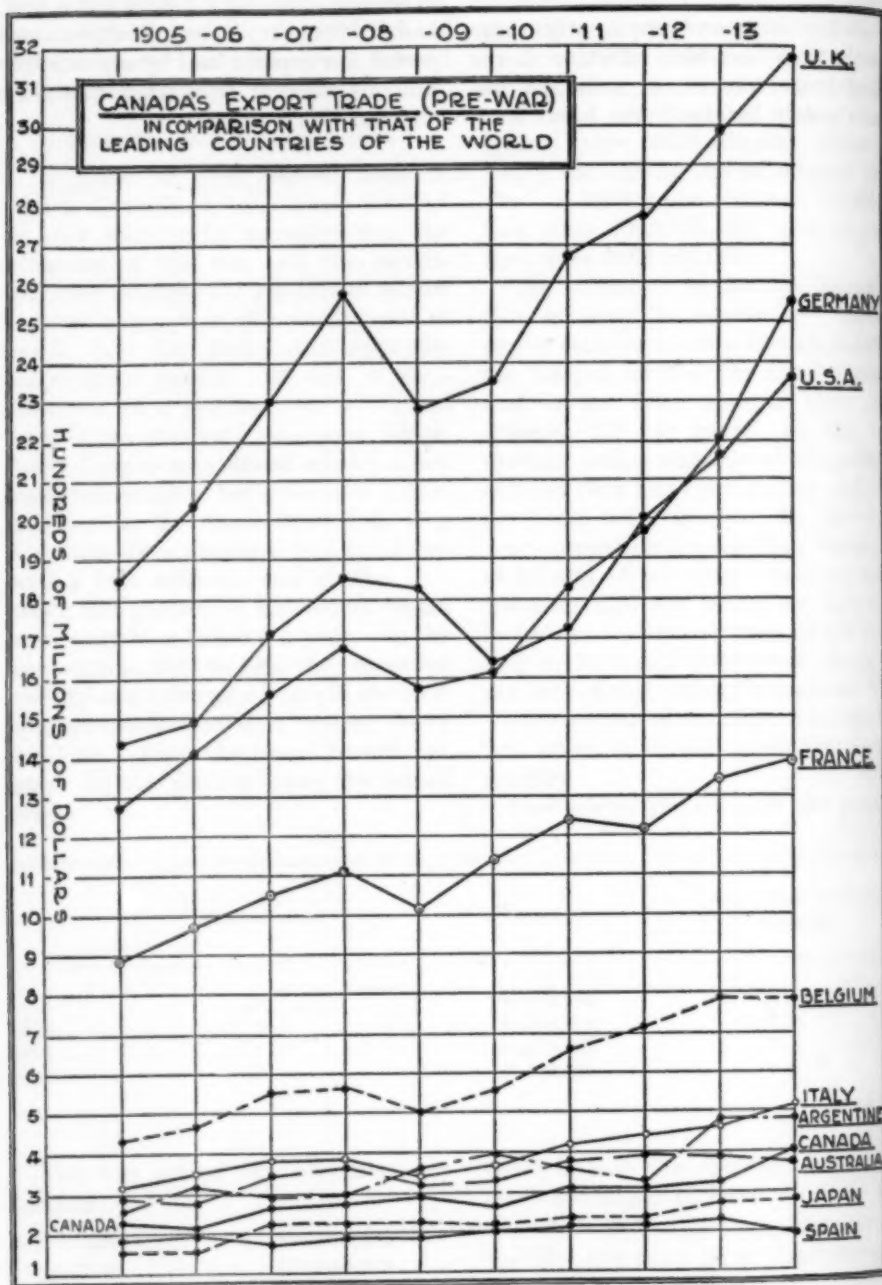
The alteration in the significance of this category is impressive. In the earlier nineties manufactures accounted for 7.5 per cent of the total exports, and in the later nineties they constituted 8.3 per cent. In the two opening quinquennials of the present century they had risen to 10.4 and 11.9 per cent respectively. In the four years preceding the war they remained at 13 and 14 per cent. Leaving aside the abnormal war years, we find that in 1920 manufactures were 35 per cent, and in 1921 and 1922 were about 40 per cent of the country's exports. The steady growth of manufactured articles has attracted much attention in the country.

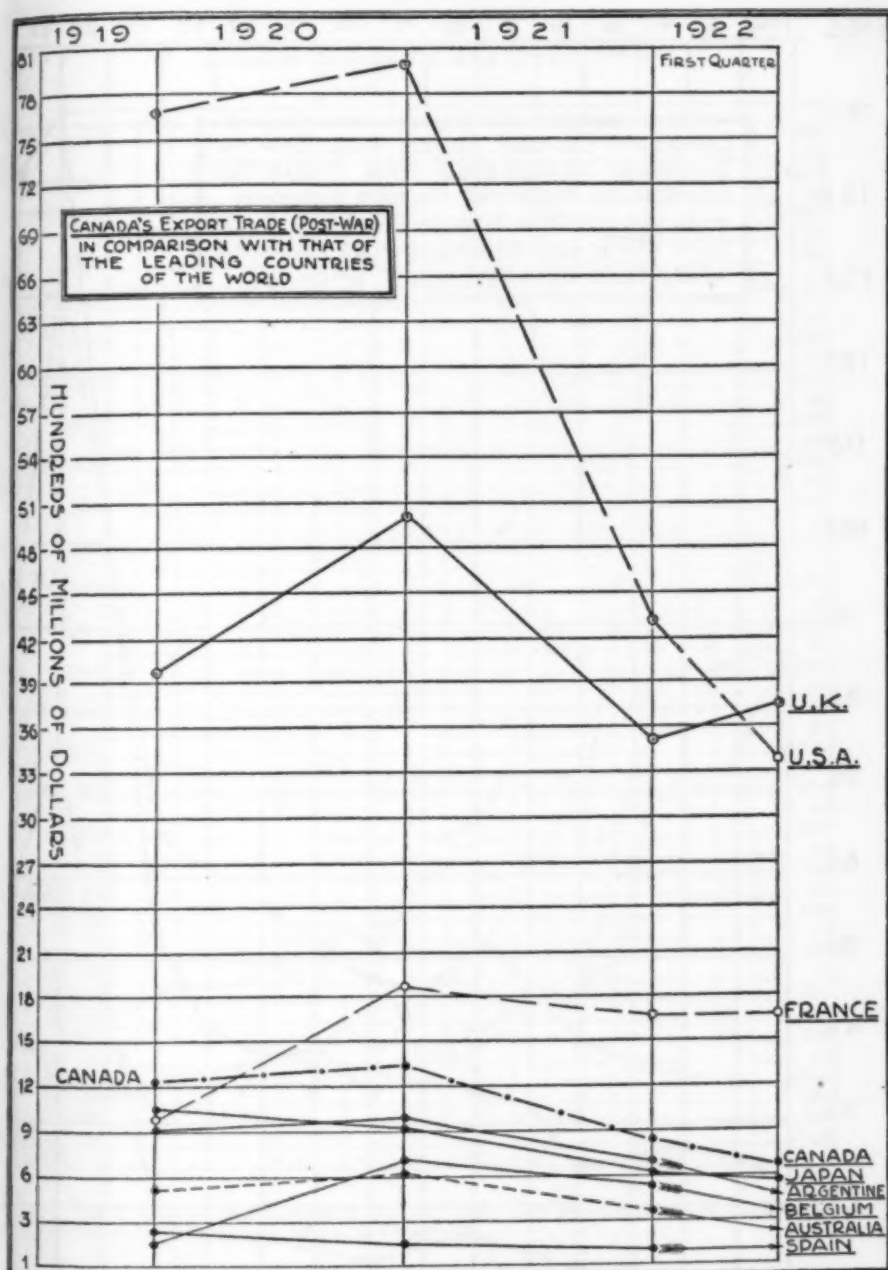
One interesting thing in the present

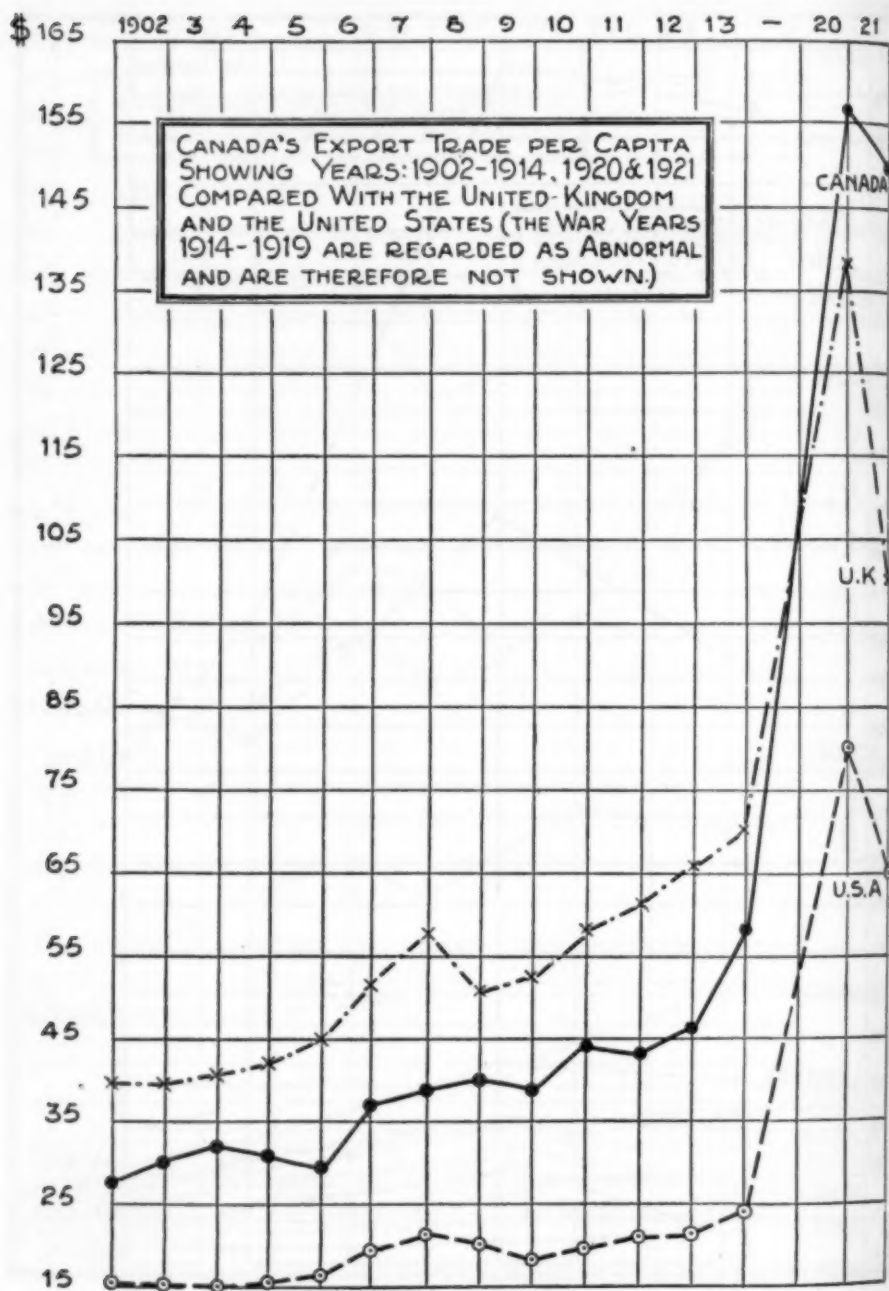
trend is that the so-called balance of trade has begun to favor Canada. On the whole it has been against her; in the fifty-five years since Confederation the balance has been favorable only in ten, and five of these were those of the war. The adverse American exchange

caused Canadians to make a serious effort to curtail imports from the United States, and apparently these for the time have been effective; in the fiscal year 1921-22, exports and imports nearly balanced, the latter lead-

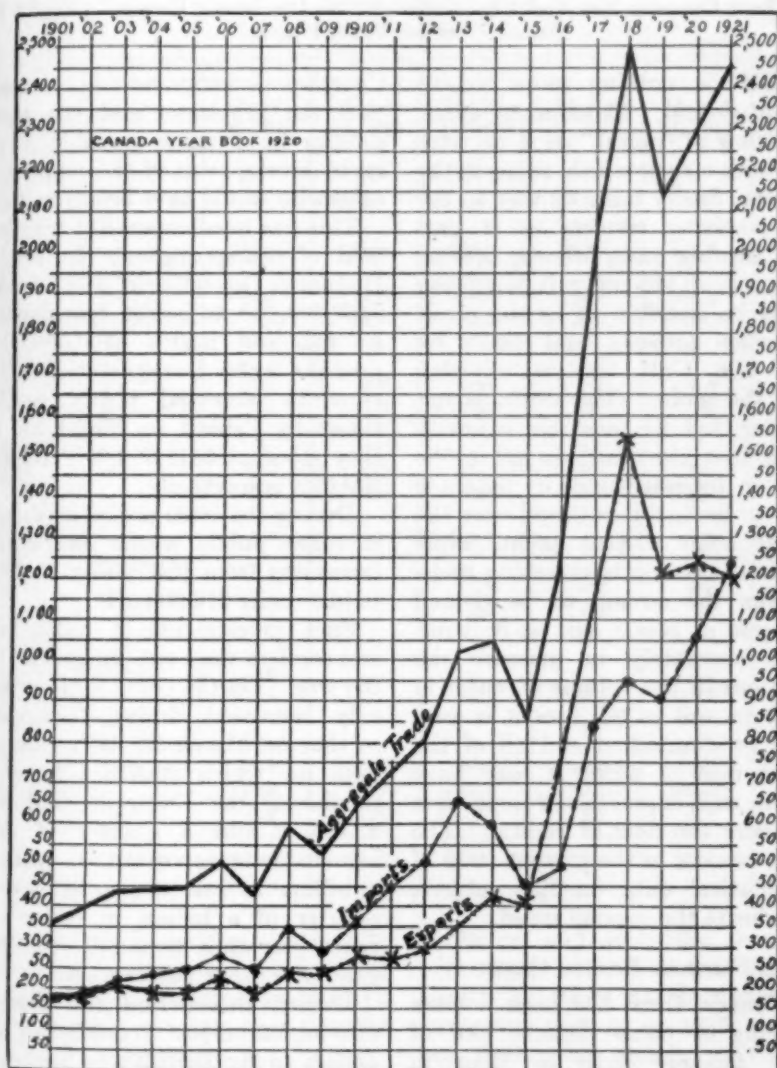
ing by some seven and a half millions in a trade of nearly a billion and a half, and in the very latest twelve-month period the exports lead by seventy-five millions. Tariff legislation has since checked this leading.







AGGREGATE EXTERNAL TRADE OF CANADA, 1901-1921.



Each vertical line represents one year from 1901 to 1919, and each horizontal line represents \$50,000,000 from zero to \$2,500,000,000.

The Flow of Capital—Canada

By HARVEY E. FISK

Bankers Trust Company, New York City; Author of "The Dominion of Canada," "English Public Finance," "French Public Finance"

THERE is nothing more elusive than capital. Economists speak of the "flow of capital" as if we were dealing with a river which, rising in the mountains, finally finds its way to the ocean, receiving rivulets as it progresses, turning water wheels, bearing on its bosom all kind of craft, fertilizing lands by its overflow or as the result of irrigation projects, and finally by joining the Gulf Stream coursing around the globe. The simile is not a bad one, but we must not overlook the fact that the water is apt to be sucked up by whirlwinds or by trade winds—to be again scattered over the earth at some distant point, while at all times the sun is absorbing moisture from the stream to be poured forth again as rain. Just as it is impossible accurately to measure the fluctuations in the volume of water in the stream and to tell how it is augmented or diminished and all of the different uses to which it may have been put, so it is practically impossible to measure the flow of capital. The best we can do, in the present state of the statistical data on this subject, is to indicate the general trend.

THE FLOW OF PUBLIC CAPITAL

In Canada there has been a close interlacing of public finance and of private finance—more so than in either the United Kingdom or in the United States. In this respect Canada seems to have been influenced by her French ancestry rather than by her Anglo-Saxon ancestry.

By direct investments in public enterprises, by loans and by guarantees, the

Canadian Government and to some extent the provinces and the municipalities have made possible a more rapid development of the country than otherwise would have been practicable.

This has been especially true in the field of transportation. In 1902 the Dominion Government was advancing \$167,300,000 to assist transportation by rail and nearly \$100,000,000 to promote water transportation. These amounts increased yearly until, as shown by Table I, on March 31, 1914, they stood at \$411,900,000 and \$177,000,000, respectively.

During the same period investments in other public works had doubled, increasing from just under \$8,000,000 to just under \$16,000,000.

Such investments in public works and services were not put an end to by the war. On the contrary they markedly increased during that period, so that on March 31, 1921 (the latest date for which statistics have been published) the Dominion had nearly a billion and a quarter of dollars invested in transportation:—just under a billion in rail and a little over a quarter of a billion in water transportation; while some \$81,000,000 had gone into other public works.

During this period the Dominion also advanced just under half a billion dollars to the British and foreign governments. Unpaid advances of this latter character, on March 31, 1921, amounted to \$187,400,000. These data are detailed in Table II.

The war cost the Dominion almost exactly two billion dollars, 9 per cent of which was met from taxation.

TABLE I
DOMINION OF CANADA

Assets
1902-1914
(00,000 omitted)

ADVANCES FOR	JUNE 30, 1902	MARCH 31, 1907	MARCH 31, 1909	MARCH 31, 1912	MARCH 31, 1914	INCREASE OR DECREASE
	\$	\$	\$	\$	\$	\$
<i>Transportation</i>						
Railway.....	167,3	198,0	254,4	333,7	411,9	244,6
Water, Canals and Har- bors.....	90,7	112,6	113,7	132,6	154,2	63,5
Waterways, Docks, etc.	8,2	12,5	15,2	19,2	22,8	14,6
<i>Advances to</i>						
Provinces.....	10,7	4,0	2,3	2,3	2,3	-8,4
Territories.....	4,5	7,6	9,1	9,9	9,9	5,4
<i>Miscellaneous</i>						
Militia.....	3,0	8,3	10,8	12,1	12,1	9,1
Public Works.....	7,7	9,2	10,6	11,9	15,7	8,0
Banks and Financial In- stitutions.....	1,5	....	1,3	....	....	-1,5
Grain and Relief Ac- counts.....	....	....	1,2	0,8	0,6	0,6
Coinage.....	....	....	0,1	1,4	2,1	2,1
<i>Other Assets</i>						
Consolidated Fund.....	0,9	....	....	....	....	-0,9
Cash Account.....	1,4	....	19,7	15,5	13,2	11,8
Investment: Sinking Fund and Consolidated Fund.....	51,1	47,2	45,6	12,5	9,3	-41,8
Specie Reserve.....	18,9	37,6	61,8	99,2	101,4	82,5
Miscellaneous.....	0,6	0,3	0,3	0,2	0,2	-0,4
Total.....	366,5	437,3	546,1	651,3	755,7	389,2

The means for making the investments in transportation and other public works, in foreign loans and to meet the costs of war were largely derived from borrowing.

In the pre-war period the Dominion had borrowed almost exclusively from the United Kingdom, such loans on March 31, 1914, amounting to \$311,100,000, while domestic debt, including Dominion notes outstanding, aggregated at that time \$233,300,000.

During and after the war period permanent market loans from the United Kingdom remained stationary, increasing slightly in 1915 and 1916, but decreasing almost in the same amount in 1920 and 1921.

The Canadian and British treasuries interchanged credits during the war. On March 31, 1921, there was still due to Canada by the United Kingdom \$141,414,000. Presumably this amount has since been liquidated.

TABLE III
DOMINION OF CANADA

Liabilities

1902-1914

(00,000 omitted)

	JUNE 30, 1902	MARCH 31, 1907	MARCH 31, 1909	MARCH 31, 1912	MARCH 31, 1914	INCREASE OR DECREASE
	\$	\$	\$	\$	\$	\$
<i>Funded Debt</i>						
United Kingdom.....	227,9	208,8	277,8	282,0	302,8	74,9
United States.....	....	....	....	....	....	..
Canada.....	9,0	7,3	4,8	4,7	0,7	-8,3
<i>Temporary Debt</i>						
United Kingdom.....	....	....	9,7	....	8,3	8,3
United States.....	....	....	....	....	....	....
France.....	....	....	3,9	....	....	....
Canada.....	....	....	....	....	....	....
<i>Dominion Notes</i>	32,8	54,8	79,3	113,3	117,8	85,0
<i>Other Debt</i>	96,8	109,0	103,0	108,3	114,8	18,0
Total Debt	366,5	379,9	478,5	508,3	544,4	177,9
<i>Summary</i>						
Foreign Loans.....	227,9	208,8	291,4	282,0	311,1	'83,2
Domestic Loans.....	138,6	171,1	187,1	226,3	233,3	'94,7
Consolidated Fund.....	....	57,4	67,6	143,0	211,3	211,3
Total Liabilities	366,5	437,3	546,1	651,3	755,7	389,2

The great increase of debt after 1914 was made at home, so that on March 31, 1921, the Dominion owed her own people \$2,441,200,000 while she owed abroad only \$461,200,000. Foreign borrowings were offset by the advances to the extent of \$187,200,000 to the mother country and foreign nations to which we have already referred.

The detailed figures of borrowings for the war period and since are set forth in Table IV.

BRITISH AND FOREIGN INVESTMENTS
IN CANADA

We have seen that the Dominion Government has in the past borrowed

substantial sums in the United Kingdom and in the United States. The Canadian provinces and municipalities have also been heavy borrowers from abroad as have been corporations, firms and individuals. A careful study of all available data leads to the conclusion that upwards of three and a half billion dollars worth of foreign capital had been invested in Canada up to the beginning of the war, in 1914.

Mr. Coats, the Dominion Statistician, estimates the borrowings from the United Kingdom to have been \$2,700,000,000 and from the United States \$750,000,000, while from another good authority we have an estimate of

TABLE IV
DOMINION OF CANADA
Liabilities
1914-1921
(00,000 omitted)

YEAR ENDED MARCH 31	CONDITION MARCH 31, 1914	INCREASE OR DECREASE							CONDITION MARCH 31, 1921	INCREASE OR DECREASE
		1915	1916	1917	1918	1919	1920	1921		
<i>Funded Debt</i>	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
United Kingdom.....	302,8	35,6	24,3	....	....	....	-26,7	-25,7	310,3	7,5
United States.....	....	....	....	75,9	....	....	60,0	....	135,9	135,9
Canada.....	0,7	....	99,6	240,0	541,2	594,4	590,9	-78,3	1,988,5	1,987,8
<i>Temporary Debt</i>										
United Kingdom.....	8,3	53,2	76,5	42,9	-172,7	205,9	-214,1	....	....	-8,3
United States.....	....	....	45,0	-25,6	80,6	-25,0	-60,0	....	15,0	15,0
Canada.....	....	19,6	-19,6	100,0	-24,9	-1,3	....	2,0	75,8	75,8
<i>Dominion Notes</i>	117,8	39,2	20,9	5,3	67,5	38,4	22,7	-34,0	277,9	100,1
<i>Other Debt</i>	114,8	8,5	-10,2	6,5	-10,4	0,9	-7,9	-3,0	99,0	-15,8
Total Debt.....	544,4	156,1	236,5	445,0	481,3	813,3	-364,9	-139,0	2,902,4	2,358,0
<i>Summary</i>										
Foreign Loans.....	311,1	88,8	145,8	93,2	-92,1	180,9	-240,8	-25,7	461,2	150,1
Domestic Loans.....	233,3	67,3	90,7	351,8	573,4	632,4	605,7	-113,3	2,441,2	2,207,9
Consolidated Fund.....	211,3	-71,9	-127,2	-12,2	....	....	....	....	....	-211,3
Total Liabilities.....	755,7	84,2	109,5	432,8	481,3	813,3	364,9	-139,0	2,902,4	2,146,7

about \$150,000,000 having been borrowed in other countries. Since 1914 the United Kingdom has invested only small amounts in Canada; in fact, on account of the necessities of the war she is supposed to have resold some \$200,000,000 of her former Canadian investments which would nearly offset new investments which she has made, so that the total investment of the United Kingdom in Canada would today appear to be not materially more than the amount at which it stood in 1914. This estimate is substantially below the one commonly accepted which is about four billion dollars, but I can find no basis for adopting the higher figure, although undisclosed data might justify a figure somewhat higher than the face of the statistics apparently justifies.

THE UNITED STATES AND HER CANADIAN INVESTMENTS

The United States would now appear to have invested in Canada, in round figures, two and a half billion dollars or almost as much as the British investment, while other foreign countries may still have a small amount invested. This would give as the total investment of foreign and British capital, as of January, 1923, in Canadian government, provincial, municipal and corporate securities, properties and enterprises, about five and a quarter billion dollars.

The investment of American capital since 1915 has been very large and this has been especially true since the Armistice. The two and a half billion dollars or thereabouts which the United States now is lending to Canada may be roughly allocated, about \$1,200,000,000 invested in bonds and the remainder invested directly or indirectly (through holdings of shares in stock companies), in farms, in mortgages on real estate, in industrial enter-

prises, in banking, in small business undertakings and in private loans. Although, as another analyst of these statistics has said, the "figure looks rather high, the available material offers no grounds for reasonable criticism."

It is computed that more than two hundred branch factories were opened in Canada by Americans in 1919 and a great number in 1920 and 1921, and that late in 1922 there must have been over seven hundred such establishments, with a further number seeking suitable locations. One of the incentives for this development is that the American manufacturers can thus supply the Canadian market and at the same time escape the Canadian tariff. Another is that by manufacturing in Canada they are able to enjoy the preferential treatment accorded to Canadian goods by many countries within the British Empire, while, under the terms of an agreement with France existing since 1907, Canada's products enter that country under especially favorable conditions.

It was estimated in 1919, when the last survey was made, that United States capital practically controlled the motor car accessory, proprietary medicine and artificial abrasions industries, while the motor car industry was divided in the proportion of 61 per cent United States and 39 per cent Canadian capital. Over 40 per cent of the electrical apparatus, meat-packing, rubber, paint and varnish, brass and copper, condensed milk and refined petroleum industries was United States owned.

American investment in Canadian industries has unquestionably largely increased since 1919. For example, it is estimated that in 1920 around \$250,000,000 of American money was invested in the Canadian pulp and paper industry or about 80 per cent

of the total capital invested in that industry.

As this article is being written, word comes that American capitalists are preparing to still further develop, on a very large scale, Canada's incomparable water powers.

All the indications point to an equalization at an early date of British and American investment in Canada.

THE FOREIGN TRADE OF CANADA

A study of the foreign trade of Canada throws a flood of light upon the flow of capital between Canada, the mother country, and foreign lands. For the past twenty-three years at least Canada always has exported to England goods of a greater value than those imported. Her trade with the United States has invariably been just the other way around—the value of imports from the United States has largely exceeded the value of exports to the United States. During this period Canada was sometimes a creditor of the other countries with which she traded and sometimes a debtor, but on balance she was a creditor.

From 1900 to 1914 Canada was a creditor of the mother country on trade balance for \$819,000,000, a debtor to the United States for \$1,649,000,000 and a debtor to other foreign countries for \$301,000,000. For the period she had a net debit balance for \$1,131,000,000.

During the war period the relative situation remained substantially the same, that is Canada was still a creditor of Great Britain, a debtor of the United States but a creditor of the rest of the world.

Because of the insistent war demand for food and munitions, exports in the eight years following 1914 were more than double what they were for the preceding fifteen years. Imports did not proportionately increase, although

in the eight years Canada consumed foreign goods valued at 33 per cent more than the value placed upon goods purchased during the previous fifteen years.

If space allowed, it would be interesting to analyze more fully the returns. It may be observed that increased purchases in the United States coincided with the greatly increased investment of American funds in Canada which we have already noted. This may be merely a coincidence and it may be an illustration of the old adage that "trade follows the dollar."

THE INVISIBLE FACTORS

In order to get at the flow of capital between Canada and other lands there are many factors to be taken into consideration besides those disclosed by trade statistics. In the first place there is the fact that exports abroad sometimes go from Canada through the United States and sometimes from the United States through Canada. Conversely imports from abroad sometimes reach Canada or reach the United States indirectly through the ports of these neighboring countries, thus swelling import and export statistics but not the actual volume of goods. It is only necessary to call attention to these crossing and interlacing trade currents to see how difficult it is to give mathematical expression to the flow of capital between Canada and other countries.

Then, too, we must make allowance for interest adjustments and for freight charges not only on the ocean between Canada and other lands, but also inland water-borne freights and rail-borne freights between Canada and the United States. Then there are to be accounted for the items of insurance, of bankers' profits, of travellers' expenditures, of money and property brought into the country by immigrants and of their remittances back home.

An analysis of these so-called "invisible" trade factors for the period from 1900 to 1914 was made in 1914 by Mr. R. H. Coats, the Dominion Statistician. No similar study has yet been made for the post-war period. The writer has made a very rough calculation for this period which may serve to give a general idea of the situation. It is gratifying to note that Mr. Coats is assembling material from which he hopes during the next year to prepare an official estimate.

The following table covering the pre-war period is made up as to invisible items and capital account from Mr. Coats' 1914 estimate. The trade figures are from *Trade of Canada*. The imports are what are technically known as "Imports Entered for Consumption (Merchandise)" and the exports are "Exports of Merchandise,"—Canadian produce, plus exports of foreign goods, previously imported. It will be noted that the indebtedness of the mother country to the Dominion on trade account was considerably more than

offset by the amount owed to her by Canada for interest and profits on capital invested in Canada. The United States was a heavy creditor on trade balance; she was also a moderate creditor on interest account. Her new capital investment was small—only about \$550,000,000, while the United Kingdom in the same period invested \$1,700,000,000 with her daughter overseas.

Mr. Coats tells us that the authorities on this subject agree in estimating that the railways made the largest demands for capital, then the government and municipalities, then individual enterprises, then land and lumber companies and finally mining companies.

The story of the post-war period is contained in the table on p. 178. We have already discussed the trade figures. Interest account again helps to balance the account with the United Kingdom, and now markedly increases the amount due to the United States.

This time the United States "ploughs

CANADA IN ACCOUNT WITH WORLD

1900-1914

(In dollars—000,000 omitted)

	UNITED KINGDOM	UNITED STATES	OTHER COUNTRIES	TOTAL
Exports—Merchandise.....	2,026	1,423	467	3,916
Imports—Merchandise.....	1,209	3,094	768	5,071
Net Merchandise Balance.....	Cr. 817	Dr. 1,671	Dr. 301	Dr. 1,155
Specie—Net.....	Cr. 2	Cr. 22	....	Cr. 24
Net Trade Balance.....	Cr. 819	Dr. 1,649	Dr. 301	Dr. 1,131
Interest Account.....	Dr. 1,263	Dr. 175	Dr. 50	Dr. 1,488
Other "Invisible" Items—Net.....	....	....	....	Cr. 103
Net Trade Balance, including Visible and Invisible Items.....	Dr. 444	Dr. 1,824	Dr. 351	Dr. 2,516
Capital Account.....	Cr. 1,700	Cr. 550	Cr. 50	Cr. 2,300

Cr.—in favor of Canada; Dr.—against Canada.

back" a big share of her receipts in Canadian investments, while the mother country barely holds her position as Canada's chief creditor on investment account. Apparently there is a large unliquidated balance due from the United Kingdom, and also a considerable balance due from foreign countries other than the United States. Assuming that these balances have partly been used in settling the debit balance due to the United States, the indications are that Canada has a large amount still due her from abroad, or it may be that these balances have been used to settle with the United States and that the United States has made a brand new investment in Canadian enterprises of a billion and three quarters of dollars. This is apparently what has happened. It will be interesting to see what Mr. Coats' analysis discloses.

BANKING CAPITAL

Fortunately for Canada, early in her history a system of banking was adopted which has proved to be admirably suited to her requirements. The banks have perfect control of the credit situation by reason of the fact that there are but seventeen chartered banks in the Dominion, which banks have nearly five thousand branches located in all sections of the Dominion and Newfoundland; also in Great Britain and in foreign countries. Thus the banking and credit system is under the supervision of a few large and powerful and well-managed institutions headed by trained bankers. Through the branch system they are able to keep closely in touch with every part of the country and to obtain accurate information regarding the status of any industry, both local

CANADA IN ACCOUNT WITH WORLD

1915-1922

(In dollars—000,000 omitted)

	UNITED KINGDOM	UNITED STATES	OTHER COUNTRIES	TOTAL
Exports—Merchandise	3,964	2,978	1,585	° 8,527
Imports—Merchandise	887	5,043	811	6,741
Net Merchandise Balance	Cr. 3,077	Dr. 2,065	Cr. 774	Cr. 1,786
Specie*—Net	Dr. 17	Cr. 303	Dr. 3	Cr. 283
Net Trade Balance	Cr. 3,060	Dr. 1,762	Cr. 771	Cr. 2,069
Interest Account	Dr. 1,155	Dr. 627	....	Dr. 1,782
Other "Invisible" Items—Net .....	....	....	....	Dr. 444
Net Trade Balance, Including Visible and "Invisible" Items	Cr. 1,905	Dr. 2,389	Cr. 771	Dr. 157
Capital Account	Cr. 50	Cr. 1,750	....	Cr. 1,800
Final Balance	Cr. 1,955	Dr. 639	Cr. 771	Cr. 1,643

* Specie statistics not published after 1918. The data for the United States have been obtained from United States customs reports. There was a notable movement through Canada to the United States for account of the United Kingdom during the war. Such figures having no direct bearing on the trade between the United States and Canada have not been used in the above table.

Cr.—in favor of Canada; Dr.—against Canada.

and general, and of any borrower. As has been well said:

The credit facilities of the country, like the bank note issues, follow where the need exists and the situation is always under control. It is the case of a few men working together against many individuals working alone.

The Canadian banks are able to extend a line of credit to borrowers much larger than would be considered safe under any other system of banking. The secret lies in the fact that a borrower cannot seek credit indiscriminately. By custom he must deal with one bank, or, at most, in exceptional cases, with two or three, and then only by common consent; thus the lending bank comes to be very closely in touch with the business of the borrower.

The principal circulating medium in use, apart from bank credits, is bank notes.¹ The combination of the branch bank system with freedom of action in regard to note issues gives to Canada a remarkably flexible banking machinery. A bank receiving deposits at Halifax, Montreal or Toronto may lend them the following day at far western points through its branches and by the issue of its own notes; the branches redeeming the notes, when presented, by drafts upon the head offices. Thus it is possible to keep the rate of interest in the interior and at far western points within one-half per cent to one per cent of rates prevailing in the large cities of the East on the same kind of credits. Through the medium of their foreign branches the banks are in a position to offer their clients excellent credit facilities in the United Kingdom and in foreign countries.

In the last twenty years the domestic

deposits of Canadian banks have increased about five-fold, the deposits in foreign branches nearly ten-fold, while the note circulation of the banks has more than doubled.

Table V gives the deposit liability and the bank note circulation at the close of each calendar year from 1902 to 1922, inclusive; also the cash reserves. The steady growth of the deposits is obvious, although the returns for 1921 and 1922 reflect the world-wide reaction in trade following the war and post-war boom.

The percentages of reserves in 1921 and 1922 were more than double those carried by the thirty odd thousand business banks of the United States, the percentages for the Canadian banks in 1921 being 14.63 and in 1922, 14.66; while the percentages for the American banks were respectively 6.81 and 6.92.

On the other hand the American banks had the advantage of the rediscounting facilities of the Federal Reserve Banks, while in Canada there is no similar arrangement for the pooling of bank credit.

The use made of the resources of the banks is brought out in an interesting manner in Table VI. It will be noted that the foreign business of the banks makes no direct addition to their facilities for lending at home. In fact loans abroad at the dates given always exceeded deposits in the foreign branches. It is also true that the banks carry larger balances with British and foreign banks than such banks carry with them.

It will be noted that the Canadian banks have not hesitated to use a substantial part of their assets in the purchase of investment securities, although such investments, except at the height of the financing of the recent war, usually have not been over 10 or 15 per cent of their total domestic deposits.

¹ Dominion notes are chiefly used as bank reserves.

TABLE V
CANADIAN BANKS
Deposit and Note Liability
(In dollars—000,000 omitted)

YEAR ENDED DEC. 31	DEPOSITS			DUE TO OTHER BANKS		NET NOTE CIRCULATION	TOTAL	RESERVES *	RESERVES PER CENT DEPOSITS AND NOTES
	Domestic	Foreign	Total	Canada	Elsewhere				
1902.....	380	37	417	4	7	56 †	484	41	8.47
1907.....	579	53	632	9	15	70 †	726	79	10.88
1909.....	793	75	868	9	5	72 †	954	105	11.01
1912.....	1,052	87	1,139	7	16	94 †	1,256	135	10.75
1914.....	1,054	99	1,153	9	24	93	1,279	217	16.97
1915.....	1,192	135	1,327	18	15	107	1,467	238	16.22
1916.....	1,346	163	1,509	9	21	129	1,668	246	14.75
1917.....	1,648	175	1,823	11	23	169	2,026	353	17.42
1918.....	1,939	207	2,146	10	28	193	2,377	392	16.49
1919.....	2,085	275	2,360	13	39	196	2,608	385	14.76
1920.....	2,043	357	2,400	14	33	175	2,622	380	14.49
1921.....	1,932	271	2,203	10	38	134	2,385	349	14.63
1922 ‡.....	1,844	323	2,167	10	40	129	2,346	344	14.66

* Current gold and subsidiary coin, Dominion notes, deposits with Minister of Finance to secure note circulation; deposits in central gold reserve.

† Partly estimated.

‡ November 30th.

TABLE VI
CANADIAN BANKS
Earning Assets
(In dollars—000,000 omitted)

YEAR ENDED Dec. 31	LOANS			BONDS AND SHARES HELD				DUE FROM OTHER BANKS			TOTAL
	Canada	Foreign	Total	Dominion*	Municipal	Corporate†	Total	Canada	Elsewhere	Total	
1902.....	378	78	456	9	15	37	61	22 ‡	23	45	562
1907.....	606	66	672	9	20	42	71	39 ‡	22	61	804
1909.....	659	179	838	13	23	50	86	50 ‡	31	81	1,005
1912.....	957	147	1,104	10	23	69	102	74 ‡	33	107	1,313
1914.....	912	128	1,040	11	22	72	105	57	46	103	1,248
1915.....	910	196	1,106	16	40	67	123	79	103	182	1,411
1916.....	933	250	1,183	31	168	64	263	83	76	159	1,605
1917.....	976	246	1,222	189	224	56	469	103	65	168	1,859
1918.....	1,204	269	1,473	207	253	53	513	122	57	179	2,165
1919.....	1,391	341	1,732	150	255	55	460	152	79	231	2,423
1920.....	1,485	396	1,881	120	191	46	357	157	106	263	2,501
1921.....	1,360	315	1,675	214	109	44	367	115	76	191	2,233
1922 §.....	1,289	354	1,643	189	86	42	317	122	122	234	2,194

* Includes Provincial.

† Includes some small foreign holdings.

‡ Estimated.

§ November 30th.

For the most part the banks have kept their investments in liquid form as may be seen by a study of the table.

It is evident, as Canada is so markedly an agricultural country, that there must be a seasonal flow of banking capital from east to west at planting time and at harvest time, and a reverse flow in the intervals. Unfortunately the published reports do not give us this information. However, a study of the monthly trend shows that there is usually a tendency for domestic loans to reach a maximum in April, then to reach a low level during the summer, increasing again in the autumn and receding in the winter.

THE NATIONAL WEALTH AND INCOME

It would be of interest, if the data were available, to trace the development of the national income, and the additions made to the public wealth, by savings and by turning the undeveloped, inert natural resources of the nation into forms serviceable to man. In 1919 Mr. Robert H. Coats, the Dominion Statistician, computed the national wealth of Canada at sixteen billion dollars which may be compared with an estimate of eleven billion dollars made, or, at any rate adopted, by Sir Josiah C. Stamp in 1914 in a paper read before the Royal Statistical Society.

Mr. Coats, in January, 1919, estimated the national income to have approached in 1911 two billion dollars and that the rise in wages and prices would probably have brought this to \$2,400,000,000 in 1918.

The remarkable increase in the yield of the income tax from \$9,343,000 in the year ended March 31, 1919,

to \$20,264,000 in 1919-1920 and to \$46,382,000 in 1920-1921 would appear to indicate that when a thorough study of the national income is next made it will be found that it is steadily growing.

Savings deposits on March 31, 1914, were \$94,677,000. They reached a maximum of \$100,356,000 on March 31, 1917. Since then they have tended to decrease being only \$97,737,000 on March 31, 1921, and \$91,943,000 on March 31, 1922. The deposits in loan companies, however, were almost double on March 31, 1921 (\$15,868,000) what they were on March 31, 1914 (\$8,104,000), while the liabilities to the public of the trust companies stood at \$87,812,000 on March 31, 1921, as against \$38,302,000 in 1914.

As we have already seen, deposits in the chartered banks increased from \$1,279,000,000 in 1914 to \$2,385,000,000 in 1921.

If to these evidences of prosperity we add the fact that the people of Canada loaned their home government \$2,207,900,000 from 1914 to 1921, we cannot escape the conclusion that the wealth of the Canadian people has markedly increased since the beginning of the war. This increase in wealth would have come anyhow, but undoubtedly was greatly stimulated by the unusual demand for Canadian products caused by the war. It is true that the two billion dollars which the war cost Canada represents capital destroyed but the demand for her products from abroad for war and reconstruction has brought about a great development of her fields, her mines, and her factories which must have largely made good this loss.

Canada's Outstanding Imports

By S. H. LOGAN

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THE extent to which Canada by her exports contributes to the trade of the world is already well known to those who are interested in this country either from an economic or from a commercial point of view. During 1922 the total value of articles exported from Canada amounted to \$884,000,000, representing for the most part, wheat and other grains, live animals, meats and dairy products, fish, furs, lumber, pulp and paper, and such minerals as asbestos, bituminous coal, nickel, gold and silver, together with a number of sundry manufactured articles of which iron and steel products, including motor cars, are perhaps the most important.

On the other hand, it is not at first sight easy to visualize Canada's import trade. It is, of course, obvious that she must purchase from abroad a number of articles which for climatic reasons she is unable to produce, or for economic reasons she would not find it advantageous to produce, but the marked development of Canada's industry during the last decade or so has to a large extent increased the ability of Canadian production to meet the demands of domestic consumption and in some cases to transfer a commodity from the import side of the trade balance sheet to the export side. In the second place, Canada has a very important "local" trade with the United States, depending largely upon industrial conditions in the producing centers and upon freight rates in the two countries, and the trade balance for the items concerned may be expected to fluctuate somewhat as these factors change. At the same

time the gross value of Canada's imports remains at a high figure, amounting to \$762,000,000 for the year 1922, and the purpose of this article is to draw attention to the main items which go to make up this figure.

IRON AND STEEL

Iron, steel and other metal products constitute the largest group item in the list of Canadian imports. In 1922 their value was \$162,000,000, or 21 per cent of the cost of all goods purchased abroad by Canada during the year. There is normally a heavy demand in this country for rolling-mill products, for engines and boilers and for various kinds of machinery and other iron and steel products, and Canada has a number of important iron, steel and other metal plants, but they are at present able to cope with only a part of the demand and a large part of this has to be met by importation. Most of the basic material for this industry is also purchased abroad. Canada is rich in minerals and is well known as an exporter of metal ores.

In the case of iron, however, while there are known to be large and important deposits at various points in Canada these, with few exceptions, have not yet been developed commercially. Iron ore, therefore, figures to a considerable extent in the list of Canadian imports, the value of the ore imported coming partly from Wabana, Belle Isle, Newfoundland, in 1922, amounting to \$2,000,000. Rolling-mill products, consisting of band and hoop iron or steel in the form of bands, hoops, bars, rails, plates and sheets accounted for \$30,-

000,000 in the list of imports in 1922, while the value of tubes, pipes and fittings contributed another \$2,000,000. A considerable proportion of this material, of course, enters directly into the field of production by becoming part of the industrial plant and equipment of the country, and to a large extent lessens the general demand for imported manufactured goods. Similarly the value of engines and boilers imported last year amounted to \$6,400,000 and that of machinery to \$22,000,000. About 40 per cent, therefore, of all the metal products imported is used mainly to increase the production of Canada's industry. The list of iron and steel imports also includes wire (\$2,800,000), farm implements (\$7,700,000), hardware and cutlery (\$3,000,000), tools (\$1,500,000), motor trucks (\$1,600,000), and passenger cars (\$12,000,000), but this list of consumers' commodities is more than offset by the analogous list of Canadian exports, the value of passenger cars exported, for instance, being nearly twice that of cars imported.

Among imported articles that consisted wholly or mainly of other metals were the following: aluminum (to the value of \$2,000,000), brass (\$4,000,000), watches and clocks (\$1,000,000), electrical apparatus (\$12,000,000). The importation of iron and steel products, and to a certain extent of those manufactured from other metals, is the result of the moderate but steady demand in Canada for articles requiring a highly specialized plant for their manufacture. It is only in a country such as the United States, where the demand for these special articles is sufficiently heavy to call for factories equipped with a plant for the purpose, that the latter can be operated at a cost that will allow the finished article to come on the market at a price which the consumer will pay.

COAL

The annual consumption in Canada of coal for all purposes is estimated at 30,000,000 tons, a little less than four tons per capita. Of this amount about 40 per cent is mined in Canada, the remainder being imported from the United States. The Canadian coal fields are located in British Columbia and Alberta on the one hand, and in Nova Scotia on the other. Between these two fields there stretches the great industrial heart of Canada, including the provinces of Ontario and Quebec. This is known as the "acute fuel" area, which, though possessing large resources of hydro-electric power, is dependent on the United States or on other parts of Canada for its coal supply. Intimately connected with this requirement is the double problem of utilizing to the best advantage the output of Eastern and Western Canada. This consists in providing at a reasonable cost a more extensive market for western coal and in reducing the costs of production in the east.

The fact remains, however, that central Canada, in consequence of its proximity to the Pennsylvania coal fields, naturally looks in that direction for its supply, and it is likely that whatever developments may take place in the East or the West, coal will continue to figure largely in our list of imports. During 1922 these imports amounted to 13,000,000 tons, valued at \$61,000,000—2,700,000 tons worth \$24,000,000 being anthracite, and 10,300,000 tons, worth \$37,000,000 being bituminous. The year just closed, however, is not a good criterion in this respect, for the reason that this country was greatly restricted in its imported supply. The year 1921 furnishes a better example. In that year the importations of anthracite amounted to 4,500,000 tons, valued at \$40,000,-

000, and of bituminous to 13,700,000 tons, valued at \$48,000,000. The normal volume of coal imported would have at present prices, a value of approximately \$90,000,000.

COTTON, WOOL AND SILK

Textiles form a considerable item in Canada's list of imports. Raw cotton is, of course, necessarily an import and must increase with the growth of cotton manufactures in this country. There are at present important cotton mills located in Canada, which produce for both domestic and foreign consumption, the total value of the output in 1920 being \$92,000,000. Nevertheless the annual value of imported cotton goods continues to be high, amounting in 1922 to \$62,000,000.

In a country such as Canada, where climatic conditions require very heavy clothing for the winter, it is only natural that the consumption of wool and of woollen goods should be high. The total value of woollen goods manufactured in Canada in 1920 was \$28,000,000. Woolgrowing is on the increase in Canada and there is a certain volume of export trade chiefly of raw wool to the United States, but not nearly enough domestic wool is produced to satisfy the total demand, and the total value of importations of this commodity and of woollen goods amounted in 1922 to \$43,000,000, of which \$4,000,000 represented raw wools, \$4,500,000 noils and tops, \$4,000,000 yarns, \$1,700,000 carpets and rugs, \$2,000,000 dress goods to be dyed, \$2,800,000 tweeds, \$11,500,000 worsteds and coatings and \$6,300,000 wearing apparel.

Silk imports have grown with the prosperity of the people of Canada. For the year 1922 the value of silk imports was \$22,000,000, of which only \$3,000,000 represented raw material.

SUGAR, FRUITS AND GRAIN

Canada is on the whole much more an exporter of foodstuffs than an importer, but these, too, figure largely in her list of imports. A certain proportion of these are derived from the local trade with the United States to which reference has been made above, but by far the greater part consists of articles which for climatic or economic reasons Canada does not herself produce. Among these the most important items are sugar and its products, which amounted in value in 1922 to \$37,500,000, raw sugar accounting for \$34,000,000 of this. Sugar refining is in fact one of the leading industries of Canada. The value of its products in 1920 amounted to \$132,000,000; this was at a time when sugar commanded a very high price and when the value of raw sugar imported was correspondingly high (about \$76,000,000 in 1920), but even taking this into account it will be seen that sugar occupies an important place in Canadian industry and trade. It is of interest to note that about two-thirds of the raw product imported is exported in the form of refined sugar.

Fruits of various kinds accounted for \$27,000,000 in the list of imports for 1922. A certain proportion of these fruits come from the West Indies, but the majority are obtained from the United States, chiefly from Florida, California and Washington.

Grains are the third most important food import, the chief items being corn (\$8,000,000 in 1922) and rice (\$2,000,000). Corn is grown in Canada to but a limited extent. The total value of grain and grain products imported amounted last year to \$14,000,000.

CHEMICALS AND OILS

The value of chemicals imported in 1922 amounted to \$25,000,000.

Apart from drugs and medicines (\$2,500,000) and in a certain measure paints and varnishes (\$3,500,000), most of these chemicals imported by Canada enter directly into industry. Thus, dyeing and tanning supplies account for \$4,000,000, fertilizers \$2,000,000, sodium compounds \$3,000,000.

In 1920 the total value of chemicals imported was \$40,000,000 and even in the depressed year of 1921 the value was \$25,000,000. Industry also requires a considerable importation of oils, for the use of factories, motor cars, light and power, etc., and this is an item which is likely to increase as time goes on. In 1922 crude oil was imported to the value of \$25,000,000, refined oil to that of \$12,000,000, and vegetable oil to that of \$6,000,000.

MISCELLANEOUS

In addition to the items given in detail above, there are, of course, many imports which figure substan-

tially in Canada's trade list. Among foodstuffs, for example, are tea (\$10,000,000), sundry beverages (\$20,000,000), meat products (\$9,000,000) and vegetables (\$5,000,000). Among wood products are lumber and timber, chiefly first-class hardwoods (\$7,600,000), manufactured wood (\$7,000,000), paper (\$8,300,000), books and printed matter (\$11,000,000). Other items are hides and skins (\$7,500,000), furs (\$8,000,000), flax, hemp and jute (\$11,000,000), binder twine (\$5,000,000), glassware (\$7,000,000), rubber products (\$7,600,000, of which \$3,500,000 represents crude rubber) and tobacco (\$7,000,000).

Several of these items will perhaps vary in value from time to time to a greater extent than the primary imports, but it may be expected that as prosperity returns and as industry grows, the demand for imported goods, especially those entering into production, will increase rather than diminish.

Marketing Wheat

By JAMES STEWART

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WHHEAT is Canada's great staple commodity. It bulks larger in the trade and commerce of the Dominion than any other commodity, and in the middle western provinces the fortunes of the wheat crop are the fortunes of all the people. Notwithstanding the great importance of wheat in the national life of Canada, probably no business in the country is conducted with so small a measure of popular understanding as the business of marketing grain. Highly specialized and technical, the grain trade and its place of business—the exchange—seem not only to confuse the lay mind but also to confound utterly the large majority of members of Parliament who are called upon from time to time to enact legislation regulating the grain trade. In the course of this short article, an attempt will be made merely to outline broadly, the outstanding features of the business of marketing Canadian wheat.

FROM PLANTING TO CONSUMMATION

To illustrate the wheat marketing industry from the time the grain is planted until it is actually consumed, we shall follow a load of wheat from the farm to its ultimate purchaser, the consuming public. The average sized farm in Western Canada is approximately 320 acres. Allowing for a certain amount of summer fallow every year, 150 acres of this is probably sown to wheat. The wheat sown in Western Canada, which produces 90 per cent of the whole, is chiefly of the Red Fife and Marquis varieties. The seed is planted as soon after the snow clears away as the ground will

permit—usually between the last ten days of April and the first ten days of May. This is harvested usually from the 10th of August to the 10th of September. The average yield varies year by year, but in a new province like Saskatchewan, is about 17 or 18 bushels per acre. In 1915 and in 1922 the average has been much higher—probably by three to five bushels per acre. If the weather is favorable, the wheat is ready to thresh within ten days from the time it is cut. If the farmer is situated within a radius of four miles of a station where there is elevator accommodation, the grain is hauled straight from the threshing machine to the elevator, or immediately loaded into a car. The farmer usually hauls his wheat to the marketing point in wagonloads averaging 60 bushels each.

On arrival at the village or town which is his shipping point, the farmer usually finds from two to eight elevators competing for his grain. As long as there is any space in the elevator competition continues to be very keen. The elevator agent examines the quality of the wheat and a mutual understanding is arrived at between the agent and the farmer as to the grade. Assuming the grade is One Northern, the elevator agent knows the value of the wheat, as he is kept advised of prevailing prices by his head office—usually in Winnipeg—from day to day, and sometimes more frequently, if there are violent fluctuations in the market. The price agreed on is based on the value of wheat in store at Fort William minus freight and handling charges. The load is

then dumped into the pit at the elevator and weighed in the presence of the owner. Assuming that the foregoing formalities have been agreed upon between the elevator agent and the farmer, the agent then prepares what is known as a cash ticket, giving the farmer's name, the gross quantity of wheat, the grade and dockage and the aggregate value of the load. This cash ticket is, in effect, a cheque to the farmer. For instance, if the net load were 60 bushels and the price \$1 per bushel for that grade, the ticket would be for \$60. If there is a bank in the town, the farmer takes his cash ticket and is immediately paid its face value, the grain firms usually having provided sufficient funds to take care of their prospective purchases from day to day. This is the simplest and most direct form of marketing.

IN CASE OF DISSATISFACTION

In the event of the farmer not being satisfied that he was securing the right grade—or for that matter, the right price—he can, according to the Canada Grain Act, as long as there is space in a licensed country elevator, demand that the elevator company store his grain, giving him the proper weights, and, in the event of a difference of opinion as to the proper grade only, can have a sealed sample agreed upon between the farmer and the elevator agent sent to the Chief Grain Inspector at Winnipeg, whose decision respecting the grade is final. The wheat, in the interval, is kept separate by the elevator agent, and the farmer instead of receiving a cash ticket issued against the wheat in this position, gets a storage ticket, showing the gross amount. If it is only a difference of opinion as to grading, that storage ticket is surrendered on receipt of the decision as to the grade from the Chief

Inspector, and a cash ticket is then issued in its place, the amount being determined on the same basis as the simpler form referred to in the previous paragraph.

A third method—and one which is very largely resorted to by farmers—is to arrange with an elevator company for space for a carload, which is usually from 1,200 to 1,400 bushels, and perhaps the grade mutually agreed upon. The farmer then receives storage tickets for each load, the tickets showing the net quantity of say One Northern, until he has a carload, more or less. At the time the farmer makes the arrangement for the space in the elevator, he usually arranges with the railway station agent for a car to be ready for the shipment of his grain to Fort William as early as possible. As soon, therefore, as the car is supplied by the railway company—provided the farmer has a carload of wheat in the elevator—shipment is made. When the car is loaded, the farmer surrenders the tickets, and in turn receives the bill of lading, on payment, of course, of the elevator fees of $1\frac{3}{4}$ cents per bushel. With this bill of lading, the farmer may go to the bank and receive a cash advance to the extent of about 60 per cent of its market value; or, this advance may be obtained through the elevator company, by similarly surrendering the bills of lading. Both of these methods are common. Whether or not the farmer takes an advance against his car of wheat, it is then in a position to be sold immediately or held until the farmer chooses to sell.

WHO ARE THE BUYERS OF "FUTURES"

With reference to the general process of marketing wheat, the question naturally arises: Who purchases the "futures" for the wheat that is sold in

the pit at the Grain Exchange from day to day? The elevator companies receive records every morning from their country stations showing the aggregate quantities of wheat purchased at country points. They, in turn, not desiring to assume any risk of the market going up or down, protect themselves by what is technically known as "hedging." That is, they sell wheat for future delivery. For example, when deliveries commence at country points in September, the possibility is that the various companies anticipate being able to make delivery at Fort William or Port Arthur, at the very latest, during October. In order to protect themselves from possible decline in the market before the end of October, these companies sell the October option on the very day or the morning after the purchase of wheat is made at country points. The option price, of course, relates to the highest grade of Wheat—One Northern, basis in store Fort William or Port Arthur. The lower grades—No. 2 and 3—are applicable at a discount of three and eight cents respectively. The buyers of "futures" are grain exporters or millers. The exporters have quotations daily from their correspondents in the importing countries, indicating values there, and prices paid for No. 1, No. 2 and No. 3 Northern Wheat c. i. f. (cost, insurance, freight) United Kingdom or European ports. The exporters, if the quotations are in line, after allowing for such factors as ocean freight, insurance, inland transportation by lake or rail or lake and rail to the seaboard, together with interest, insurance, as well as in some cases shrinkage or loss in transit, purchase the October option, or any other "future" which best suits the fulfillment of the price indicated or specified by the importing traders. The pur-

chase of a "future" may be made by a representative of a Canadian miller, who may be buying with the prospect of selling his product to the Canadian consumer either direct, or through the baker in the form of bread.

WHEAT FLUCTUATIONS

Wheat being a world commodity, and there being so many exporting as well as importing countries, it is subject to fluctuations largely influenced by the conditions of crops in the various wheat-growing countries. For instance, if the European bread grain crops are light, thereby involving a larger proportion of importations into those countries, and provided the exporting or surplus-growing countries have only an average crop, the tendency would be for values to stiffen. On the other hand, if the European importing countries have comparatively bountiful crops, and the requirements from the exporting countries are correspondingly reduced, the tendency would be to depress values. As wheat crops mature in various countries throughout the world practically every month in the year (*see* table at the end of article), the world's wheat supply is subject to almost daily changes in weather conditions—actual and imaginary. One night's frost or a few days' too much rain, or too much hot weather, might vary the Canadian crop to the extent of 100,000,000 bushels. In Australia, crops are subject to drought; in the Argentine, sometimes to drought and at other times to frost. The failure of the Monsoons in India has a very marked effect upon the export grain business. Wet weather during the harvesting period also has an influence on market values.

Grain dealers have constantly before them these varying conditions, and consequently a shower of rain, or a

spell of dry weather has its effect on prices and accounts to a large extent for the fluctuations in values which are daily recorded on the world's markets. In addition to this, a shortage of ocean tonnage at certain times or in certain parts of the world may affect transportation, thereby possibly reducing the value of the wheat awaiting shipment, as wheat held awaiting shipment in a seaboard elevator incurs interest, storage and insurance, and often the risk of losing the right market.

FACILITIES FOR EXPORTING

The Winnipeg grain exporting firms usually have offices at either Montreal or New York. This, in a measure, facilitates business, as ocean tonnage can better be secured from seaboard ports than from Winnipeg. Even ocean tonnage rates fluctuate, and it is the exporter who can secure the cheapest and most suitable freight to comply with the requirements of the importing country, who can afford to pay the best price for wheat at Canadian or American seaboard ports. Consequently, most of the direct cabling with the importing countries is done through Montreal or New York branches of Canadian firms. The Winnipeg offices secure the grain in store at Fort William or Port Arthur from the elevator and general grain gathering agencies, then obtaining tonnage by lake or rail or both, and forwarding the grain to the seaboard port, when the final stages of the business are taken over by the seaboard offices.

The principal Canadian exchanges are in instant telegraphic communication with the various grain exchanges on the American continent, with the result that if conditions are unsatisfactory in so far as the growing crop in Canada is concerned, this is im-

mediately reflected in Minneapolis, Chicago, St. Louis, Kansas City and elsewhere. Or, if conditions in the great western wheat belts of the United States are not satisfactory, or the reverse, such influence is practically instantly reflected in the quotations of values in Winnipeg, so sensitive is the market to prevailing economic influences.

WHEAT IN THE PRAIRIE PROVINCES

As already mentioned, 90 per cent of the wheat produced in Canada comes from the three Prairie Provinces of Manitoba, Saskatchewan and Alberta, and with the exception of a very small quantity of winter wheat sown in Alberta, the wheat produced on the prairies is sown in the spring. Spring wheat requires, as a rule, about ninety days from the time it is sown, before it is ready to harvest. Weather conditions may shorten or lengthen this period slightly, but generally, within three months from the date of seeding, it is ready for the binder. Very few farmers on the prairies have granary accommodation to store their wheat, consequently a large percentage of it is hauled direct from the threshing machine to the primary market. There are about 4,500 country elevators throughout the three provinces of Manitoba, Saskatchewan and Alberta. The number of elevators at a station ranges from one up to nine, and these elevators are located at between 1,600 and 1,700 points throughout the prairies. There are loading platforms provided by the railways, at about 2,000 points. Providing country elevator facilities constitutes an enterprise of large proportions. There are some three hundred companies and individuals financially interested therein, to the extent of at least fifty million dollars. The loading platforms which are provided by the railways will

accommodate about 5,000 cars. The bulk of the wheat is marketed through the country elevators, which have a combined capacity of about 140 million bushels.

IMPORTANCE OF TRANSPORTATION

On arrival at Winnipeg, all cars of grain are held for government inspection. Inspection of wheat alone, during the heavy movement in the autumn, runs as high as 2,500 cars per day. While the actual market for Western Canadian grain is in Winnipeg, the point of delivery on contracts—and hence the point upon which prices are based—is at the head of the Lakes—at Fort William and Port Arthur. Because of the long four hundred mile tract of unproductive territory lying between the fertile prairies and the head of Lake Superior, and because of the natural trading instinct which brings the buyer as close as possible to the field of the seller, we have in Canada a thoroughly unique situation—where a large terminal market for wheat is located four hundred miles from the elevators and warehouses where finally the wheat itself must be stored for delivery on sales. This distance between Winnipeg and Fort William, moreover, increases the importance of transportation as a factor in marketing Canadian grain. In Chicago, Minneapolis, Duluth, and other large grain markets in the United States, the markets and terminal elevator storage facilities are located in the same city. Winnipeg is therefore in a peculiar position by comparison with American markets, which fact is emphasized when it is observed that Winnipeg is the largest actual grain market on the continent.

When the wheat reaches the head of the Lakes it is stored in terminal elevators to await shipment eastward.

One of the functions of the terminal elevators is to clean the grain in accordance with directions of the Government Inspection Department. There are over thirty terminal elevators at Fort William and Port Arthur, with a total storage capacity of about 55 million bushels. This constitutes a reservoir much smaller in size than that of the country storage space, and involves, in order to keep pace with receipts from country points, a steady flow of shipments eastward down the Lakes, to the Georgian Bay ports and elsewhere. Navigation is open from the 1st of May until the 12th of December, and as it is cheaper to ship by water than all-rail, the bulk of the grain has always been shipped over the Great Lakes. During the winter months when navigation is closed, the elevators are used as storage houses from which cargoes are moved by all-rail to the seaboard, constituting a much smaller turnover than when the grain is pouring through them during the navigable months. An analysis of shipping records for several years past shows that 90 per cent to 95 per cent of the wheat shipped from the terminals goes forward by boat to the Georgian Bay ports or Buffalo, all-rail shipments ranging only from 5 per cent to 10 per cent of the wheat shipped from the terminals eastward.

AMOUNT OF WHEAT EXPORT

On reaching the seaboard, the grain is loaded into ocean bottoms and borne to its ultimate market overseas in fulfilment of contracts made possibly many months before, by cable or otherwise. About 70 per cent of the wheat produced on the prairies is exported as wheat and flour—80 per cent of the exportation being wheat, and the other 20 per cent, flour. The wheat grown in Eastern Canada is altogether a soft, winter wheat, in

contrast with the strong, hard wheat of the west. It is used for manufacturing purposes in Eastern Canada, and is marketed very largely at local milling centers; a certain amount of it is also handled by grain merchants in Toronto and Montreal Boards of Trade. But as far as marketing export wheat is concerned, that is really a western problem. The actual export figures for wheat and flour combined for the past seven years range in terms of wheat from 90 million to 290 million bushels annually, and average over that period, 165 million bushels annually. An analysis of exports by shipping routes for the year 1921-22 shows the following distribution of the combined exports of wheat and flour:

To the United States direct.....	9.8%
To the United Kingdom via Canadian seaports.....	21.3%
To the United Kingdom via American seaports:.....	47.3%
To other countries via Canadian seaports.....	10.3%
To other countries via American seaports.....	11.3%

In the year 1920-21, 32.8 per cent of the combined wheat and flour exports went direct to the United States; 39.9 per cent went to the United King-

dom and other countries via United States ports, and 28.3 per cent went to the United Kingdom and other countries via Canadian ports.

THE WORLD'S WHEAT HARVEST

January: Argentina, Uruguay, Chile, Australasia.

February: Upper Egypt and Southern India.

March: Egypt, Tripoli, Morocco and India.

April: Persia, Mesopotamia, Arabia, Asia Minor, Syria, Cyprus and Mexico.

May: Algeria, Tunis, Central and Southern Asia, Florida, South Carolina, Georgia, Alabama, Louisiana and Texas.

June: Italy, Spain, Portugal, Greece, Turkey, South of France, South Carolina, North Carolina, Georgia, Alabama, Arkansas, Texas, Virginia, Kentucky, Oklahoma, Missouri and Kansas.

July: France, Austria-Hungary, Roumania, Bulgaria, Servia, Switzerland, Southern Russia, Southern Germany, South of England and the Central Wheat States of America.

August: Northern United States, Southern Canada, Russia, the United Kingdom, Germany, Belgium, Holland and Denmark.

September: Sweden, Norway, Siberia, Northern Minnesota, North Dakota, Canada, Northern Russia.

October: Sweden, Finland, Northern Russia, Northern Canada.

November: Peru and South Africa.

December: Burmah and Argentine.

The Canadian Tariff

By J. A. STEVENSON

Parliamentary Press Gallery, Ottawa

THE Canadian tariff as a national institution has no very ancient history. It was not established from any settled conviction of its virtues on the part of either the statesmen or people of Canada, but was the fruit of a purely opportunist move in the political game. In 1858 there was held in Toronto a Protectionist Convention which deputed a committee to make representations to Mr. Cayley, the Inspector General of Finance, for the establishment of higher duties, and in the Budget of 1858 their demands were partially met. It fell to Sir Alexander Galt who added further duties in 1859 to vindicate against the protests of British Chambers of Commerce and the Colonial Office the right of Canada to set up and maintain her own tariff system. His despatch of October 25, 1859, is a constitutional document of the highest importance and its most pregnant passage runs as follows:

Self-government would be utterly annihilated if the views of the Imperial Government were to be preferred to those of the people of Canada. It is therefore the duty of the present Government distinctly to affirm the right of the Canadian Legislature to adjust the taxation of the people in the way they deem best—even if it should happen to meet with the disapproval of the Imperial Ministry. Her Majesty cannot be advised to disallow such acts unless her advisers are prepared to assume the administration of the affairs of the Colony irrespective of the views of its inhabitants.

A DEFINITE PROTECTIONIST SYSTEM

This courageous assertion of fiscal freedom was challenged no further by the Imperial Government and the Canadian Ministry continued to levy

duties on imports on varying scales, but they remained at a very modest level and the first steps towards a definite protectionist system were not taken till 1876 when the Conservative Party which had lost office through the famous Pacific scandal and were anxious to restore their fortunes gave ear to the pleas of the manufacturers. When the Liberal Government of Mr. Mackenzie refused to increase the duties in the Budget of 1876, Sir John Macdonald came forward with what he termed "The National Policy," and the whole Conservative Party followed him in support of a protectionist system. There is a tradition at Ottawa that the Mackenzie Cabinet were half expected to raise the tariff schedules and that in that event the Conservative Party would have emerged as virtuous free-traders. Macdonald admitted that he found it hard to abandon his free trade convictions, but the circumstances were favorable to protectionist arguments and he won an overwhelming victory in the election of 1878.

Although on assuming office he is recorded to have greeted a deputation of expectant manufacturers with the following words, "Now, gentlemen, I am the little boy who is up the tree to shake down acorns to the hogs," he kept his election pledges and enacted a high protectionist tariff in face of the criticisms of Blake, Laurier and other Liberal leaders. In the Budget debate of 1879 when the new policy was introduced, the Liberals advanced practically all the arguments which they continued to reiterate during their long period of opposition. They assailed the tariff's unfairness to the

laboring classes, its encouragement of trusts and combines, the iniquity of the coal duties, the injustice to the Maritime Provinces, the harm done to British commercial interests, and the fact that the protection actually afforded was far in excess of what was set out in the tariff schedules. For the next eighteen years the Liberal Opposition directed its main attack upon the tariff system and the anti-protectionist case came to enjoy wide acceptance. The first fruit of the tariff was a rapid growth of factory industry in Eastern Canada, but in many cases it proved a hothouse development and by 1890 the country was plunged into hard times. The rapid settlement of the western prairies did not materialize, immigration declined, and people crossed the border to the United States in thousands. The tariff became unpopular and the Liberals were materially assisted to win their great victory in 1896 by their professed zeal for a free trade policy.

THE BRITISH PREFERENCE

But, safely ensconced in office, they contented themselves with some special reductions and the institution of the celebrated British Preference which was not so much a mark of loyal devotion to Britain as a half-hearted attempt to redeem their preëlection pledges. The latter were very conveniently forgotten but at the cost of the support of many voters, especially in the rural districts who resented the capitulation to the manufacturers. The Laurier Government, however, cheerfully accepted and continued to maintain the policy of high protection, tempered only by the British Preference and fortunately for them the great western boom which brought general prosperity and rapid development began in 1898 and helped to banish the tariff issue. As long as capital was pouring in for railway con-

struction and schemes of expansion, and natural resources were being sold or mortgaged to the foreign investor, the effects of the tariff were scarcely perceptible. But when the boom began to subside and realities had to be faced, the farmers of the West, who were the chief sufferers from the tariff burden, organized a political revolt and forced the Laurier Government to negotiate the Reciprocity Treaty of 1911. It was defeated through a combination of circumstances and a "loyalty campaign" which many of its promoters would like to forget, and the Conservative Party came into office pledged to maintain the policy of high protection. The Underwood Tariff gave Canada many of the advantages of the Reciprocity Treaty, but on the other hand the Borden Government under the excuse of war necessities imposed a special war surtax of 7½ per cent on the general tariff, and 5 per cent on the British preferential rates.

RISE OF TARIFF REFORM PARTY

The war naturally stilled all tariff controversies, but soon after it ended the fiscal question emerged as an active political issue. The Coalition Government, which was then in office, removed the special war taxes, but this concession did not placate most of their western supporters who broke away and proceeded to lay the foundation of the organization now known as the Progressive Party. This party promulgated as its program what was known as the New National Policy. Among other reforms it advocated drastic fiscal changes including a wide extension of the free list, free trade with Great Britain in five years, and a general reduction of duties. In 1919 the Liberal Party also drafted a new platform at a National Convention and in their anxiety to stave off the advent of the third party pledged themselves

to fiscal reforms almost as drastic as those contained in the New National Policy. But the bait thus held out did not attract the insurgent farmers who went ahead with the organization of the Progressive Party and in their campaign of propaganda made the evils of the tariff their leading theme. The Conservative Party on the other hand stood firm by the principle of adequate protection.

THE TARIFF CONTROVERSY

In the general election of 1921 the Conservatives labored manfully to convince the electorate that the tariff was the supreme issue of the contest and that its destruction at the hands of the Opposition groups would spell economic devastation for the Dominion, but the presence of well-known high protectionists in the inmost councils of the Liberal Party encouraged voters in the industrial centers to believe that they could punish the Meighen Government for its misdeeds without endangering the safety of their tariff schedules, and as a result a Liberal Government came to office in December, 1921. The Progressives who made criticism of the tariff an integral part of their campaign captured many seats in Ontario and the West, but the election plainly left the protectionist interests still in control of the situation. It however brought once more the tariff controversy into the foreground of Canadian politics and since Canada has not recovered her pre-war standards of economic prosperity it continues to occupy public attention.

The Canadian debate about the tariff proceeds on very stereotyped lines. The manufacturers and the supporters of protection lay stress upon the value of the home market, the need for national self-sufficiency, the demand for other careers than

agriculture can afford and the necessity for maintaining "key" industries. They attribute to the kindly shelter of the protective tariff the amazing growth of great cities like Montreal, Toronto and Winnipeg and the steady progress of industrial development in scores of towns throughout Ontario and Quebec. They point out that the tariff has compelled many American corporations and firms to establish branch factories in Canada. This practice has increased since the British Government gave preferential trade concessions to the Dominions and many American firms now fill their exports orders at their Canadian plants. But on the other hand grave alarm is expressed in many quarters at the ultimate effects of the steady permeation of Canadian industry by American tariff.

CRITICISM

The chief criticism of Canada's tariff system comes from the farmers' organizations who lose no opportunity of protesting against its evil effects upon the agricultural industry. They go further and claim that it is a disastrous handicap upon all the natural industries of Canada. The Dominion, they argue, has special capabilities for the production of grain, livestock, forest products and minerals, but their full and profitable utilization has been retarded by the effect of tariff duties which increase the cost of machinery and all implements of production and by raising the cost of living force wages upward. They admit that through the tariff a number of secondary industries have been successfully established in Canada, but they also contend that a substantial proportion of them have no real place in the economic life of the country and are simply kept alive at the expense of the natural primary industries. In answer to the

manufacturers' contentions about the value of the home market, the farmers' spokesmen retort that this year less than 50 per cent of the farm produce of Canada could be consumed at home. Large export markets must be found and they can only be secured by permitting the liberal ingress of imports. The agrarian case against protection can best be summed up by two paragraphs from a memorial presented in 1920 by the Canadian Council of Agriculture to the Drayton Tariff Commission at Winnipeg. They run as follows:

We suggest to you that to continue the tariff in anything like its present form is a direct contradiction of the purpose of those who originated the protective tariff. Its purpose was to build up and establish manufacturing industries. To bring this about the consumers were asked to endure the higher prices entailed. There is no sense of proportion in giving to an industry fully established the same assistance which was given to it when striving to secure a foothold.

We suggest to you that profits secured by any industry by an unjust law are like gambler's gains—easily diverted to improper uses. The revolt of the farmers against both traditional political parties is due in part to the widely held belief that each has been bonused by the protected industries and so indirectly bribed to uphold protection.

ADVERSE EFFECTS UPON SETTLEMENT

Critics of the present fiscal system in Canada, however, can find their best ammunition in the figures of the 1921 census. It showed Canada to possess a population of 8,769,630, and after every allowance has been made for the effects of the war this figure is far short of the expectations which had been formed. If Canada had been able to keep all her native-born and her immigrants within her bounds her population in 1921 should have been as follows:

1911 population	7,300,000
Excess of births over deaths	1,575,000
Immigrants (1911-1921) circa	1,900,000
	10,831,000
Less casualties, direct and indirect, of the war	180,000
	10,831,000

It is plain, therefore, that there is a clear deficiency of two million souls, and that there has been an annual exodus from Canada on a disconcerting scale. The agricultural population of all the eastern provinces has declined and the gains in the west have been disappointing. For such a state of affairs it is easy to allocate some blame to a fiscal system which allows protected manufacturers to levy upon the pioneer settlers a heavy toll and to reduce to a disheartening level the financial gains of the agricultural community.

ACTUAL TARIFF INCREASE

At the general election held in December, 1921, 66 members who supported the tariff platform of the Canadian Council of Agriculture were elected to the Federal House. Among them there was disposition during the first session of a new Parliament to give the Liberal Ministry a chance to implement its fiscal pledges and while the meagerness of the tariff reductions offered by the Budget was severely criticised from the Progressive benches, no real insurgency developed. It now transpires on the evidence of the trade and customs returns that the changes inaugurated last May by the Liberal Government have actually increased the tariff burden to the consumer; a number of schedules were pared down, but an increment in the rates of the sales tax which has protective features more than wiped out any benefit accruing from the reductions offered. Under such circumstances the Progressives are likely to raise sharply the

tariff issue at the approaching session of Parliament.

Appended herewith is a table of the average ad valorem rates levied under the Canadian Customs Tariff of different periods and during the last four years.

	DUTIABLE IMPORTS PER CENT	ALL IMPORTS PER CENT
1896.....	30.0	19.2
1906.....	27.0	16.5
1916.....	27.2	15.5
1919.....	21.5	12.3
1920.....	22.5	14.7
1921.....	20.6	14.1
1922.....	24.5	16.2

FREE TRADE AS YET IMPOSSIBLE

But the necessities of the revenue situation make complete free trade quite out of the question for Canada in the immediate future and while tariff reform has a larger contingent of active champions at Ottawa than ever before, they are not likely to prevail against the rally in defence of the protective system which members of both the Liberal and Conservative parties would unite to sustain. The Liberal Ministry may make some further concessions to placate the anti-tariff forces, but the main fabric of the protective system will be maintained. It seems likely, however, that protection has now passed its high-water mark in Canada and that the tendency henceforth will be towards a lowering of the scale of duties rather than their increase. The Prime Minister of Great Britain has summoned an economic conference of the states of the British Commonwealth and doubtless the possibilities of trade coöperation will be thoroughly exploited by the delegates. The idea of complete free trade within the British Commonwealth has many keen advocates, but at present the sentiment of local protectionism is too

strong in the Dominions to permit of its general acceptance.

The truth is that no preferential arrangement with the British Commonwealth can ever compensate Canada for comparative exclusion from the greatest market in the world which lies at her doors. In 1911 confidence in a flowing tide of prosperity, which proved only temporary and sentimental considerations induced her to reject an agreement which would have led to close commercial intercourse. Today trade relations between the two countries are not exactly in a happy state, but powerful influences on both sides of the boundary are anxious for their betterment and sooner or later it will come. Today the chief obstacles to a profitable reciprocity arrangement are the manufacturers of Canada and the farmers of the middle-western states of the Republic. It has been suggested that the desire of the latter for the completion of the St. Lawrence Deep Waterway might soften their opposition to a comprehensive agreement which would cover the whole field of the economic and transportation interests of the two countries which overlap at many points.

Meanwhile the tariff issue bids fair to continue as one of the staple ingredients of Canadian politics. A few innocent souls cherish the fond delusion that it can be entrusted to the merciful wisdom of a permanent tariff commission and thereby banished permanently from the field of public controversy. But the experience of the United States and other countries which possess impartial tariff commissions nullifies such hopes. It is vain to expect that the citizens of Canada or any other democratic state will ever allow an issue which so seriously affects the social and economic life of the whole community to pass from the control of legislatures elected by popular vote.

The British Preference

By JOHN LEWIS

Editorial Staff, *The Globe*, Toronto

TARIFF preferences involve a compromise between free trade and protection. They cannot exist where there is absolute free trade, nor where protection is rigidly applied for the sole benefit of the producers in the country under the jurisdiction of the tariff-making body. When tariff preferences were given by Great Britain in favor of Canadian grain and flour, before the repeal of the Corn Laws, they were really in the nature of mitigations of the Corn Laws, for the purpose of giving cheaper food to the people of Great Britain, as well as out of consideration for colonial interests. In this respect the motive was not unlike that which led to the Canadian preference in favor of British products, many years later.

FEELING OF DISCONTENT

Canada therefore at first benefited by the British movement toward free trade. But when that movement culminated in the abolition of the Corn Laws, all imported grain was treated alike and the preference in favor of Canada automatically disappeared. There was discontent in Canada. There was a movement for annexation, which came to nothing. There was a movement in favor of reciprocity with the United States, resulting in the treaty of 1854. Efforts to find another channel for Canadian trade were seen also in Galt's protective measures of 1858 and 1859, and in Confederation, which united Nova Scotia and New Brunswick, and afterwards Prince Edward Island and the West with old Canada. The protective system was further extended when the "National

Policy" was introduced in 1879; the purpose being to cultivate internal rather than external trade.

No one then thought of seeking relief in a renewal of the tariff preferences by Great Britain, because free trade was regarded as the fixed and unchangeable policy of the United Kingdom. On the other hand, the movement for industrial protection in Canada, tending to diminish imports from Great Britain as well as from foreign countries, did not pass without protest. Galt's tariffs were attacked on that ground in Great Britain, and he replied with a spirited declaration of the fiscal independence of Canada. When Tilley introduced the National Policy budget of 1879, Mackenzie, leader of the Liberal opposition, moved an amendment which among other things declared that the tariff was calculated "to create an antagonism between the commercial policy of the Empire and Canada that might lead to consequences deeply to be deplored." Sir John Macdonald has been represented as flouting the loyalist objection by saying: "So much the worse for British connection." The saying was not his, but that of a newspaper zealous for protection.

RECIPROCAL PREFERENCES

The situation was unchanged until some thirty years ago, when doubts began to be cast upon the permanence of free trade in Great Britain, and proposals were made for a commercial union of the British Empire, or a system of reciprocal preferences. Sir John Macdonald favored the latter idea, though the movement made

no great headway during his life. Other Canadian Conservatives, observing the course of the controversy in Great Britain, took up the idea of reciprocal preferences, attracted to it partly on the Imperial side, partly from a sentimental desire for the revival of protection in Great Britain. Passing over some earlier manifestations, reference may be made to a debate in the Canadian House of Commons in 1892. On April 25th of that year, Mr. McNeill, a Conservative member, moved

that if and when the Parliament of Great Britain and Ireland admits Canadian products to the markets of the United Kingdom, upon more favorable terms than it accords to the products of foreign countries, the Parliament of Canada will be prepared to accord corresponding advantages by a substantial reduction in the duties it imposes upon British manufactured goods.

MOVEMENT FOR TARIFF REFORM

That the movement for tariff reform as it was called had made some progress in Great Britain, is shown by the fact that Mr. McNeill was able to quote from the *London Times* an article favoring a customs union of the British Empire and a resolution adopted at a Conservative convention at Birmingham advocating mutual preferences.

To Mr. McNeill's resolution an amendment was moved by Mr. Louis Davies, then a leading member of the Liberal opposition, now Sir Louis, Chief Justice of the Supreme Court of Canada, in these words:

Inasmuch as Great Britain admits the products of Canada into her ports free of duty, this House is of the opinion that the present scale of duties exacted on goods mainly imported from Great Britain should be reduced.

Sir John Thompson, then Prime Minister, in supporting the McNeill

resolution, said that it would be entirely consistent with our own manhood, and the independence of our own Parliament, and not a filibustering resolution such as the amendment which proposed to give away something and get nothing in return. The Davies amendment was defeated and the McNeill resolution carried on a party division.

This debate is of interest because in it issue was definitely joined between the two parties. The Conservatives held steadily to the position that there must be reciprocity in preferences. This put them at the disadvantage of advocating delay until Great Britain was ready to abandon free trade; while the advantage of the policy outlined in the Davies resolution was that it allowed Canada to act alone, by a mere modification of the protective tariff. To Conservatives preferential trade appealed as a victory for protection in England; to Liberals as a move toward freer trade in Canada; while both appealed to Imperial sentiment.

In the following session the matter was brought up again by Mr. Dalton McCarthy, a leading member of an Imperialistic group and a Conservative who had broken with his own party on the tariff and on other questions. On March 14, 1893, he moved a resolution favoring tariff reform including:

The substantial reduction of customs duties in favor of the United Kingdom in whose markets all Canadian products are admitted duty free, and of those nations which under treaty obligations with Great Britain would be entitled to the same advantages.

He asked the House also to declare its readiness to make a like reduction in favor of such other portions of the Empire or such other foreign countries, especially the United States of America, as are willing to reciprocate

in matters of trade with Canada on fair and equitable terms. This amendment was defeated on a vote which was strictly a party one, for although Mr. McCarthy had been a Conservative, his support came entirely from Liberals.

BUDGET SPEECH

A change of government was the result of the general election of 1896, and on April 22, 1897, the Budget speech was made by the Liberal Minister of Finance, Hon. William S. Fielding. As part of a general plan of reduction of taxation it included a preferential tariff which was in form an offer of favorable tariff treatment to any country which would reciprocate, but which in substance applied mainly to imports from Great Britain. The form was adopted because commercial treaties made by Great Britain with Germany and Belgium were supposed to stand in the way of a direct preference. This difficulty was afterwards overcome. The preferred imports were to be admitted at seven-eighths of the general duty until July, 1898, and afterwards at three-fourths of the general duty.

In this speech the Minister took direct issue with those advocates of preferential trade who insisted that a Canadian preference to Great Britain should be made only on condition that Great Britain should give Canada a preference on grain, a step which would necessitate taxing the foreign import. No more unpopular project, he said, could be offered to English people than a duty of breadstuffs. They might in course of time change their views and if they could be induced to do so by fair argument, it would be a good thing for Canada.

But why should we wait for England to take action? England has dealt generously with us in the past. England has

given us a larger degree of liberty than is possessed by any other country on the face of the earth. She has given us liberty to tax her wares even when she admits our goods free, and we have taxed them to an enormous degree. Why should we wait for England to do more? Somebody must make a move in this matter, and we propose that Canada shall lead the way.

CANADA LEADS WAY

That was the key to the position. Somebody must make a move, and Canada led the way. The Conservative plan involved negotiation, the action of one country depending on the action of another. Mr. Fielding substituted for that, independent, unconditional action. At once the wheels began to move. The British Government denounced the treaties with Germany and Belgium, which would have prevented British colonies from giving any tariff preference not extended to Germany and Belgium. In the following year the terms of the preferential tariff were altered so as to give the preference expressly to British imports alone. In 1900 the preference was increased from one-fourth to one-third of the general customs duties.

Mr. Fielding, as has been seen, did not demand a reciprocal preference from Great Britain, a demand which in 1897 and for some years afterwards would have meant asking Great Britain to depart from its policy of free trade, and impose a tax on foreign grain. But in 1902 the situation was changed. The British Government imposed a duty of a shilling a quarter (about three cents a bushel) on grain, not for protection, but as a revenue tax to aid in paying the expenses of the South African War. There was an opportunity to obtain a preference for Canada, not by the imposition of a tax upon British imports, but by a measure in relief of taxation, similar

to the preference given by Canada. The Canadian Government accordingly asked that Canadian products be exempted from this or any future duty, and the Imperial Conference of 1902 passed a resolution in the same sense, applying, of course, to all colonies. It having been intimated that the Canadian preference was not a sufficient consideration for a radical departure from British fiscal policy, the Canadian Government declared that they would consider the enlargement of the Canadian preference if their request was granted.

THE CHAMBERLAIN CAMPAIGN

It would seem that Mr. Chamberlain, then secretary for the colonies, was in favor of this arrangement, but that he could not carry his colleagues with him. What happened was that the shilling duty was retained for a short time on all grain, whether foreign or colonial, and was then repealed altogether. The Conservative Government had insisted, as strongly as any Liberal Government could have done, upon treating the duty as for revenue alone, and not in the slightest degree admitting any concession to protection or preference.

Mr. Chamberlain's resignation from the Government in 1903 was due to his desire to be left free to go in advance of the Government and conduct a vigorous campaign for his policy of protection and preference. But with all his powers of persuasion and personal influence he failed. The time was not auspicious. The tide of opinion was running against the Government, not toward the Chamberlain idea but toward those of the Liberal and Labor Parties, which in 1906 achieved an overwhelming victory. The project made no further progress. It is true that as a result of the Great War a measure of protection was

introduced, but it was mainly for domestic purposes and was not in the full sense a development of Chamberlain's Imperial policy. It did, however, provide for certain preferences upon imports from British countries overseas.

To return to Canada. In 1906 the preference was placed upon a new basis. Instead of a flat or uniform preference of one-third, there was a tariff column in which every item was set forth with the general duty and the preferential duty. In some cases the preference was increased, in some decreased. On the whole Mr. Fielding believed that the tariff was more favorable to Great Britain than before. The result is that the preferential tariff is now set forth in detail, instead of being ascertained by deducting a uniform percentage from the general duties.

EFFECT OF PREFERENCE ON BRITISH TRADE

The effect of the preference on British trade with Canada was referred to by the Canadian Minister of Finance in 1906. He said that from 1890 to 1896 the imports from Great Britain fell from \$43,000,000 to \$29,200,000. "At that time the preferential tariff came in—the tide was turned and the British imports into Canada last year amounted to \$69,000,000."

Since that time the volume of Canadian trade has increased so greatly that comparisons would be of little value. The preference has not revolutionized trade. Imports from the United States still far exceed those from Great Britain. In part this is due to the fact that the neighboring Republic supplies Canada with large quantities of raw material for manufacturing industries. Geographical proximity and similarity of fashions in dress,

housekeeping, farming, manufacture and merchandising, play their part in encouraging imports from the United States. There has never been any inquiry into the bearing of ocean freights upon trade between Great Britain and Canada, but obviously they must play an important part in regulating prices.

It must be borne in mind also that Canada is now a highly industrialized country, more so than any other British country outside Great Britain. This also is to some extent due to proximity with the United States, which fosters industrial rivalry and ambition, as well as facilitating the establishment in Canada of branches of United States industrial concerns.

INFLUENCE OF CANADIAN EXAMPLE

There remains to be considered the influence of the Canadian example in encouraging a general system of tariff preferences throughout the Empire. A measure of protection is now a part of the British fiscal system. This is not due to any pressure from Canada or other overseas British countries, but to a sentiment produced by the war and German industrial rivalry. It was felt to be unsafe to allow Great Britain to be dependent, as to any important industry, upon any country that was hostile or might become so. Certain "key industries," deemed to be essential to national life, were encouraged by a protective tariff. The title "Safeguarding of Industries Act" indicates the purpose of the legislation. But where such duties are imposed, products of British countries are admitted at a lower rate. In this respect there has been an advance from the position of some twenty years ago, when the British Government refused to remit, as to colonial imports, the duty of a shilling a quarter on grain. The British duties do not

apply to such staple foods as are produced in Canada. The sentiment against taxing these is still strong. The preference is of interest to Canadian manufacturers rather than to farmers. It may give an impulse to the establishment in Canada of branches of American manufacturing concerns which are in a position to compete in the United Kingdom, and which desire the benefit of the preference.

The Canadian tariff preference is granted to a large number of British countries besides the United Kingdom, and in many of these the Canadian example has been followed to a greater or less extent, and Canada benefits with other British countries. A detailed account of all this legislation hardly comes within the scope of this article, and it might be misleading, as the tariffs are subject to constant change through the independent action of various legislative bodies. Fiscal autonomy, a part of the general right of self-government, is not impaired. Each community goes its own way, but the desire to give and to receive benefits through preferential tariffs is always present.

LACK OF UNIFORMITY

Carried out to the utmost, the idea of preferential trading would involve free trade among British countries, and a uniform tariff as against the rest of the world—Canada and Australia being in the same position in the Empire as New York and Texas within the United States. That has been rejected as impossible, though Mr. Chamberlain once seemed to contemplate at least a long step in that direction. The different parts of the Empire are far apart, and they have developed along diverse lines. They have become accustomed to fiscal independence, and each desires to shape its own tariff legislation and

change it from time to time as the needs of revenue or industrial development may indicate.

There could be no agreement as to absolute free trade, and no regulation of a common tariff by one body, and no binding agreement of a far-reaching character. There is therefore a lack of uniformity, and there is the variety and flexibility that characterize British institutions all over the Empire. The framers of the Canadian preferential tariff are entitled to the credit of

recognizing these essential features of the situation. The Liberal Government in 1897 set the example of a voluntary preference, exacting no conditions and yielding no control; and this example has been generally followed. It is a system which eliminates friction, and which facilitates all the progress that is possible in a widely scattered Empire consisting largely of countries enjoying as Canada does absolute freedom in regard to taxation and the regulation of trade.

Canada's Budgetary System

By B. J. ROBERTS, B.A.

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UNDER the Canadian constitutional system, the Executive Government is responsible for the direction and coördination of financial policy. Parliament is supreme; it grants supply, authorizes the levying of taxes and reviews expenditures. Its procedure is designed to afford every opportunity for free and frequent discussion of money measures and its enactments and machinery provide numerous safeguards. Appropriations are not made, however, nor are imposts levied, except upon the initiative and recommendation of the Government. This executive control and responsibility, in which the Minister of Finance is the central figure, is fundamental in the budgetary system of the Dominion.

Early in the Parliamentary session the Minister of Finance submits to the House of Commons the estimates of expenditure for the ensuing financial year, which runs from April first. The sums required are set out in detail under appropriate divisions, grouped according to the distinct services maintained by the several departments of government.

CAPITAL EXPENDITURES

A differentiation is made in the estimates, and carried into the public accounts, between ordinary and capital expenditure, the latter including for the most part the original cost of public buildings, railways, canals, harbors and such like. It is not pretended that the capital accounts indicate with any degree of accuracy the value of the physical properties of the Government and, as applied to governmental

expenditures, the distinction may not be logically defensible. It is considered to be useful, however, to keep this separate record of outlay on these more tangible projects.

The first step in the compilation of the estimates is the submission to the Minister of Finance by his colleagues in charge of the several departments of their estimate of requirements for the year, together with explanations and relevant statistics, particularly in the case of new services or increased demands. A compilation is made and a tentative total of the year's requirements is struck. The estimates are reviewed minutely by the Cabinet as a whole, the recommendations of the Minister of Finance are considered, and such charges are made as public policy or the financial necessities of the day appear to warrant. As presented to Parliament, the estimates constitute the policy of the Government on expenditure.

In addition to the main or general estimates, it is usual for supplementary estimates to be submitted. As respects the current year, these would represent unforeseen items, and as respects the new year, additional outlay, notably for public works, which the Government was not ready to recommend when the main estimates were brought down. For 1922-23, main estimates totalled \$466,983,350 and supplementary, \$13,298,015.

IMPORTANCE OF BUDGET SPEECH

In his consideration of the estimates before submission to Parliament, the Minister of Finance has perforce to keep before him the question of

revenues, in addition to the necessity and expediency of the proposed outlay. Thus, there is coördination between expenditure proposals and the revenues. Soon after the close of the financial year, the Minister makes to the House of Commons his annual budget speech, which is regarded as one of the most important events of the session. The tendency has been to avoid burdening this statement with financial statistics. It is, in essence, a bird's-eye view for Parliament and the people of the financial stewardship of the Government covering the past year, a forecast of the revenues of the coming year to meet the proposed expenditures which have already been submitted, and the recommendation of such changes in taxation as are considered advisable. This speech provokes an extended debate covering all aspects of the financial administration of the country.

Of late years, due to the burden imposed by participation in the war, there has been a continuous addition to the revenue-producing measures. In 1913 the total budget of the Dominion was not more than the sum which is now required for interest on public debt alone. While the provincial governments are limited to direct taxation within their respective territories, there are no constitutional limitations placed upon the Dominion with respect to the sources from which its revenues may be derived. Prior to the war, federal taxation consisted solely of indirect duties of customs and excise. New levies have since been added, more than doubling pre-war taxation revenue, of which in 1921-22, 34 per cent was from direct and 66 per cent from indirect taxation. The large yields were from customs, income and sales taxes. With the growth of taxation, there has lately been a call from public bodies for a conference between

Dominion and provincial authorities, with a view to the consideration of double taxation, simplification of returns, administration and so forth, but no action has yet been taken in this direction.

THE ESTIMATES AND PARLIAMENT

On presentation to the House, the estimates are referred to the Committee of Supply, composed of the whole House sitting as a committee, which allows greater freedom of discussion than when the House is in formal session. All appropriations are discussed and voted on in this Committee in the form of resolutions. Each item or vote is taken up separately and the rule is that members should not digress from the particular service for which provision is being made. It is often arranged by agreement between the parties, however, that a general discussion of the administration and policy of a department should take place under a particular item. The responsible minister of each department comes to the Committee prepared to make explanations, provide information and, aided by his colleagues in the Government and House supporters as necessary, to defend the proposed expenditures. A member may move for the reduction or elimination of a vote; a motion to increase any appropriation is not in order, in view of the provision in the British North America Act that grants and taxes must be first recommended by message of the Governor General or, in effect, by the Government.

The resolutions passed by the Committee are reported to the House and referred to the Committee of Ways and Means, also a Committee of the whole House, for concurrence, and on report again, a Supply Bill, based upon the resolutions is introduced and passed

through the various stages. Usually most of the discussion takes place in Committee of Supply and the other stages are formal. The Supply Bill often also provides for the raising of moneys by loan, but at times special enactments are put through for this purpose.

The rôle of the Senate is acquiescent in money matters. Appropriation bills and taxation measures are passed by it, but it has long been recognized that the granting of supply is the sole right of the Commons (the British North America Act providing that all such measures must first be introduced in that Chamber) and that the Senate should not throw out or amend the principle of such bills, although there may be full discussion on the policies involved.

"VOTE ON ACCOUNT"

It occurs often that Parliament has not passed the Supply Bill by the time the new financial year commences. Any unexpended amounts from the past year's appropriations lapse and cannot be availed of for expenditures relating to the new year. If the Government service is to be maintained, appropriations must be authorized. It is therefore usual to make what is termed a "vote on account." A special Supply Bill is enacted granting such amounts as have already passed the Committee of Supply and a fraction of all remaining items, usually one-twelfth or one-sixth, a month's or two months' supply. Before agreeing to this customary deviation from the accepted procedure, the Opposition extracts from the Government a verbal undertaking that, notwithstanding the vote on account, new and controversial expenditures will not be undertaken until Parliament has considered and passed on such items in detail.

TAXATION CHANGES

The resolutions covering taxation changes proposed by the Minister of Finance are considered in detail by the Committee of Ways and Means, much as the expenditure resolutions are dealt with in Committee of Supply and after report the formal enactments are put through. Private members may move for the diminution of a duty, but it is not in order to propose a new and distinct tax. In theory, it is competent for a member to propose the substitution of another tax of equal amount for one proposed by the Ministry but, in practice, all proposals for the imposition of taxes emanate from the Government.

It is customary for customs and excise taxes to become effective on the day following their announcement in the House by the Minister of Finance, although it may be many weeks before they actually become law. The statute fixes the imposts retroactively. The purpose of this is to safeguard the revenues. While the whole of the Government's taxation proposals for the session are usually recommended in the budget speech, they may be brought down at any other time.

CONTROL AND AUDIT OF EXPENDITURE

Having considered the framing of the budget and its enactment by Parliament, there remains the question of administrative control and audit of expenditures and revenues, provision for which, as well as for general accounting practice, is laid down in enactments known as the Consolidated Revenue and Audit Act and the Department of Finance and Treasury Board Act. The Treasury Board, composed of the Minister of Finance as Chairman, and five other members

of the Ministry, with the Deputy Minister of Finance, a permanent official as Secretary, besides having authority to prescribe the system of public accounting, acts as a sub-committee of the Cabinet Council, in matters relating to finance and disbursements. The Department of Finance has general supervision of financial matters, keeps the public accounts and administers the public debt. The other important agency is the Auditor General, who is appointed by the Government but removable only on the Address of Parliament. His function is to see that moneys are not paid except within Parliamentary authority, to audit all disbursements and to report fully thereon to Parliament.

All public moneys from whatever source derived are paid to the credit of the Minister of Finance and Receiver General, and constitute the Consolidated Revenue Fund, from which disbursements may be made only on the authority of Parliament. No cheque may issue from the Department of Finance except upon the certificate of the Auditor General that there is Parliamentary authority for the expenditure. Exception is made in the case of Governor General's warrant and where the Auditor's decision that there is no provision by Parliament for the expenditure in question has been overruled by the Treasury Board upon the written opinion of the Minister of Justice that there is such authority. Where the Auditor objects to payments on other grounds, the Treasury Board is the judge as to the sufficiency of the Auditor's objection and may confirm his decision or order the payment.

SPECIAL WARRANTS

The Governor General's warrant is the one exception to the necessity for a specific grant by Parliament for

every expenditure. The Audit Act provides that the Government may issue such warrants, where the need is urgent and the Minister of Finance certifies that there is no Parliamentary vote applicable. The Auditor General is required to submit to Parliament, in the early days of the session, a statement of all overrulings of his decisions and of payments against appropriations established by these special warrants. The latter are carefully scrutinized by Parliament with a view to assuring itself that the trust which has been reposed in the Government, for emergency expenditure, has not been violated.

In ordinary circumstances, the Department of Finance does not exercise that degree of supervision of departmental expenditures that is found in the British Treasury under a similar budgetary system. At times, however, such as when there is an unexpected falling-off in revenues, the Minister of Finance is required to call upon his colleagues for curtailment of their respective departmental expenditure programs and to impose restrictions on sums to be drawn from the treasury against appropriations.

There remains to be considered the functions of the Public Accounts Committee. This is a large select committee of the House of Commons, with supporters of the Government invariably in the majority. Its function is to examine and enquire into the expenditures of the past year, and the conduct of the public accounts, generally, as revealed by the printed Public Accounts and the Auditor General's Report which are compiled and presented to Parliament by its order. It has no executive authority; its function is to enquire and to report its findings to the House. It has at its disposal all the means to enable it to investigate the year's business without

reserve. In view of its composition, the Committee's enquiries are often criticized on the ground of being dictated by partisan motives. However this may be, it cannot but be regarded as having a very salutary influence on the conduct of the country's affairs. In addition to serving as a basis for this Committee's work, the Public Accounts and Auditor General's reports are available and extensively used by the members when the estimates are under discussion.

THE UNITED STATES AND CANADA

The fundamental differences between the Canadian and the United States budgetary systems are those which result inherently from the different constitutional relationship of the executive to the legislature in one country, as compared with the other. In Canada the budget, on the expenditure as well as the revenue side, while conforming in general to the policy of the majority of the elected representatives of the people, is fixed in substance and in detail by the

executive. Additions thereto cannot be made without its consent. In the United States, the President submits to Congress—as the recommendations of the Executive—the combined estimates of expenditures, compiled by the Director of the Budget, and his own views on taxation and revenue matters, but neither in theory nor in practice is Congress confined to these recommendations. Under the Canadian system, detailed consideration of both expenditure and revenue proposals, so far as the legislature is concerned, takes place in the House of Commons sitting as a whole in committee. In Congress both Houses function, each with its various committees on appropriations and its Committee on Ways and Means. Under the Canadian system the initiative is yielded to the executive, assuring a coördinated budget. At the same time provision has been made for a well ordered system of review and audit calculated to afford full publicity and to safeguard the public treasury.

The War Finance of Canada¹

By RIGHT HON. SIR THOMAS WHITE, K.C.M.G.

Federal Minister of Finance, 1911-19, Toronto

THE Finance Act of 1914 is one of the most important measures that was ever placed upon the statute books of Canada, one of the most useful, not only during the war, but looking also to the future,—an Act which gives much greater stability to our banking system than it formerly possessed.

Before the war the banks had to meet, if required, all their obligations in legal tender. A depositor, for instance, might go to a bank and say: "I want to draw a certain amount, and I will take it in Dominion notes, or gold." The banks therefore made it a point to keep themselves very strong in reserves. Those reserves would be gold, Dominion notes, and call loans in New York, because call loans in New York can be called, and their amount is thus the equivalent of gold. So the banks had to keep themselves strong in reserves, because a period of money stringency might occur and they might be called upon for legal tender to a very large amount indeed. Now those periods of financial stringency did come along. The memory of some will probably go back to 1907 when there was a money crisis in the United States and gold payments were suspended. That was a period of panic in the States and a period of financial stringency in Canada. Money was tight. In the old days when money was tight the banks would say,

We have the crops to move, and there is a critical situation existing in the United States, or elsewhere in the world, we have to be careful about our reserves, more than that we have to increase our reserves.

The result was they were bound to curtail credits to commercial and industrial concerns and the agricultural community,—they could not help it,—and that did a great deal to accentuate the stringency. They had to build up stronger reserves to meet anything that might arise out of this critical situation, as well as take care of such demands as, say, the crop movement might make upon them. In other words, the banking system prior to the Finance Act of 1914 lacked flexibility, though when I say that, it was infinitely more flexible than the banking system of the United States at that time.

MEASURES WHICH ALLAYED PANIC

When the war broke out we had a panic here in Canada. There was a panic everywhere. On the continent and in Great Britain all the bourses and stock exchanges closed their doors. New York had to follow. They thought they could keep open but soon found they could not. There was a perfect flood of security-selling all over the world. At that time there was a demand in Canada for gold and people got a little panicky. So on a historic day in Ottawa I met with the members of the Canadian Bankers' Association and we adopted measures which immediately allayed the panic and which formed the foundation of the Finance Act of 1914, an Act which

¹ NOTE: This article has been reproduced by Sir Thomas White's permission from an address which he gave, January 22, 1922, to the Toronto Bankers' Educational Association.—Ed.

should have been on our statute books many years before to meet just such a contingency as that. What was done was this: We suspended the payment of gold, we permitted the banks to avail themselves of the privilege of the excess circulation prior to August 31st; we permitted them to pay their creditors in their own notes, and last, but certainly not least, we created a rediscount department or a loaning department in the Department of Finance. We said to the banks:

The Dominion Government will loan you in Dominion notes, which are legal tender, twenty-five, fifty million dollars, we put no limit, if you need it. You probably will not, but if you do, we will loan without limit on securities approved by the Minister. You bring in high-class securities, or commodity bills, because they represent their full value in goods, and we will lend to you at 5 per cent Dominion notes that will make you liquid and you need not worry about your reserves. There was no more panic after that announcement was made.

From that day to this there has been the utmost confidence in the Canadian banking situation, no sign of panic. That gave flexibility to our banking system, made our bankers confident that they could meet any situation that could arise, and, of course, they could give the public very much more extensive credits than they otherwise would have got, because the bankers knew that if a period of stringency should come, they could go to the Finance Department and get Dominion notes upon the deposit or pledge of securities satisfactory to the Minister of Finance. In August, 1914, I introduced into the House of Commons the measure which embodied all these provisions, that is the Finance Act of 1914. That Act is available, and may be brought into operation by the Government by Order-in-Council in case of war, invasion or panic, real or

apprehended. Away back in 1907 when the panic was on in the United States, the Government of the day in Canada loaned Dominion notes to the banks as needed, upon securities, but was without any legislative authority for doing so. It was the right thing to do, but no permanent measure followed. But now under the Finance Act of 1914 the provisions I have mentioned are in effect. We are not through the after-war period yet, but they are in effect until September, 1923, and I have no doubt that if at that time it is found desirable to extend them, they will be extended. Whether they will need to be extended will depend principally upon the standing of our exchange as compared with that of the United States. But the flexibility given to our banking system by that Act has been of incalculable value to the agricultural, commercial and industrial interests of Canada, apart from war conditions. Much good legislation in the world arose out of war conditions, because weaknesses were disclosed which had not been discovered before.

DOMINION NOTES

It is necessary now to say something about Dominion notes. As is well known, the banks issue their notes to the authorized amounts if they so require, and in addition to that there is a currency in Canada known as Dominion notes. I shall deal with them, first, under the legislation that was in effect before the war, then as to what was done in the war period, and the situation as it is now, treating the subject very briefly.

Before the war the Dominion Government issued its notes against gold. In August, 1914, it had out \$112,000,000. The Dominion Government may issue its notes in denominations of \$1, \$2, \$4, \$5, \$100, \$500, and any

multiples of \$100 it chooses. The banks are not permitted to issue a note for less than \$5. Why? Well, it is an advantage to the Government to have out what it called the fiduciary note circulation. There is always a great deal of money in the form of notes in the pockets of the people, used for making change and for till-money. Before the war it used to be estimated that there were twenty-five or thirty million dollars out in the form of Dominion notes in denominations under \$5 in the hands of the public. That money, in the hands of a couple of million families, would never be presented for redemption, so that it was in the nature of a free loan, not like a bond issue on which you pay 5 per cent. It is free money if it is not covered by gold. If covered by gold, of course, the Dominion would be losing its interest because it would have had to pay for the gold. Before the war the law was this: Take the first \$30,000,000 of Dominion note circulation, only 25 per cent had to be covered by gold. This \$22,500,000, which was called fiduciary circulation (circulation not covered by gold or any other security) was in the hands of the people and not likely to come in. After \$3,000,000, the Dominion notes were secured dollar for dollar by gold. Therefore in getting back to the \$112,000,000 of Dominion notes which were outstanding before the war, the chartered Banks of Canada held \$90,000,000 of that, \$22,000,000 of which was in the hands of the general public; and the Dominion Government held against that \$91,000,000 in gold. Thus there was \$1,000,000 in gold more than was required, having regard to the fiduciary circulation. We were truly on a gold basis. No country was on a better basis—could not have been. Then came the war, and the Finance Act of 1914 was enacted.

ISSUANCE OF NOTES

In the summer of 1917 at the express request of the British Government we gave them a credit of \$50,000,000 in Dominion notes for the purchase of cheese, butter, meats, oats and other products of Canada. Those products were required to feed the civilian population in Britain and the armies in the field. Canada had to have a market for her products. Great Britain needed the products but could not pay for them in pounds sterling, as they had to be paid for in Canadian money here. How was Great Britain to get that money here? It was before our Victory loans, before we had been asked for any extensive credits, and this \$50,000,000 was absolutely required. We were borrowing from Great Britain very large sums to pay our soldiers, buy munitions, etc., so we made the issue of notes.

In the fall of 1917, as a result of the requirements of Great Britain for large sums here to pay for our products, we improvised the first Victory loan, the purpose of which was not only to provide for our military expenditure in Canada, but also and principally to give Great Britain credit here to buy our commodities which they desired to have and we desired to sell. But in the meantime we had to turn the Finance Department into a bank for the purpose of financing the Imperial Government in carrying out the purchase of our commodities. Do not forget that on the other side the Imperial Treasury had turned itself into a bank to finance our heavy expenses in Great Britain and on the continent. I received a telegram from Mr. Lloyd George and Mr. Bonar Law pointing out the situation and asking us to meet it if necessary by an issue of currency. For the \$50,000,000 for which they asked, the British Govern-

ment deposited high-class securities of a value of \$60,000,000 in London to the credit of the Dominion Government as cover. In addition we issued some \$26,000,000 of notes in aid of the railway situation against Dominion guaranteed bonds.

But the largest amount of notes out during the war represented loans made to the banks upon high class securities under the Finance Act of 1914. At the present time the result of all this is that there are \$287,000,000 of Dominion notes outstanding, secured as to \$85,000,000 with gold, and the balance by high-class securities, which will gradually come down. On the whole, I think, we may congratulate ourselves on having an extraordinarily good financial situation in Canada.

SYSTEM OF BORROWING

Now a word as to borrowings: Before the war all the borrowing of the Dominion Government was done in London. Why? Because we could borrow there more cheaply than in any other place, much more cheaply than in the United States, and much more cheaply than in Canada. Besides which, in Canada, the savings of the people in the banks were required for the ordinary commercial business of the country. So the Dominion Government, since Confederation and prior to that, when it required loans for capital expenditures, public works, etc., borrowed in London. The method was very simple. The financial agent of the Government in London was the Bank of Montreal. The Government would cable the bank that it desired to have a loan issued at a proper time, having regard to market conditions. The Government had its broker there and the matter was taken up with him. The Dominion Government securities are what are known as trustee investments in London. A trustee se-

curity is a security in which a trustee may invest trust funds, and there is an enormous amount of trust money in Great Britain, whereas the class of trustee investments is limited. A trustee cannot invest in stocks or industrial bonds, only in the bonds of municipalities and governments, first mortgages, etc.

Dominion Government securities were on that list in England, and the result was that they were always in demand by trustees for investments. As the range of available securities was small, they would always sell at a low interest yield, in other words a high price. The Dominion Government's securities would sell on a 3 per cent, $3\frac{1}{2}$ per cent, getting up to 4 per cent basis just prior to the war, whereas in the ordinary case it would be 5 per cent or 6 per cent on a good bond. If market conditions were not right just when the money was needed, the Government would put out Treasury Bills, five-, ten-, fifteen million dollars of three- or six-months Treasury Bills, which were marketed at a certain rate of interest, $4\frac{1}{2}$ per cent, $4\frac{1}{2}$ per cent,—whatever the market would demand at the time,—to tide us over a period of tight money. At the end of that time you would consider the situation. If money was still tight you would put out a new Treasury Bill issue, but assuming it was fair financial weather, or that at the time you first desired to raise the money it was fair financial weather, then you would have your loan underwritten. The broker would take it up and underwrite it with those who underwrite such issues—well-known houses in England made a specialty of doing that. Prices were fixed amazingly close as they had every object in maintaining the market, not driving for a high price but exactly hitting the proper price at

the time, because they were interested in other issues as well as in ours. Even if the loan would be only partially subscribed, it would not be called a failure. The underwriters would take the balance unsubscribed and gradually put it on the market as it could take it, taking their little loss, if necessary. That was their business—underwriting.

So that is how the Dominion Government financing was done in England before the war.

BORROWING IN LONDON AND NEW YORK

When the war broke out we went to New York in 1915 for \$45,000,000. Next year, \$75,000,000; then \$100,000,000, which was afterwards paid off. Borrowing in New York is different from borrowing in London. The London market is a world market. For generations, yes for centuries, the investor in Great Britain has been investing in securities all over the world. Issues of almost every government in the world have been made in London, and of enterprises carrying on business at the ends of the earth, and of municipalities on the continent as well as in England. So it is a wonderful world market. They know the value of securities better than any other people in the world. In the United States, before the war and, to a certain extent, it is true yet, the investing public were not world investors. They could find all the investment opportunities they needed in their own country and they were very slow to buy outside securities. Of course, Canada was a neighbor. They knew our conditions and were glad to take our securities and they took them in very large amounts—Dominion, provincial, municipal, and of many of our industries. But the mode of floating a loan there is a little

different from that in London. In New York a syndicate is formed and a price fixed by negotiation. They try to make a price that will make the loan a success; that is, they want it over-subscribed every time or they do not regard it as a success. They fix a price at which they think the public will take up the whole issue and clear the underwriters. The syndicate is formed, they negotiate and buy the entire amount, underwrite it, then offer it to the public for subscription; the public subscribe and the money comes in, they pay you the cash and the transaction is complete.

VICTORY LOANS

Now we come to our own situation in Canada and the Victory loans. We had to feel our way in these loans. Since the war people have been heard to say that we could have floated a \$500,000,000 loan in Canada before the war. That is not so. The money for the Victory loans was made as the conflict went along. There was increased production, higher prices, large sums of money coming to the people who produced and sold supplies and commodities. Then we appealed to the public who had this money to take the Victory loans. The money raised by the loans financed further production and sales. This made a very fluid situation. The people of Canada were able at the end of the war to say: "We do not owe anything in Europe, we do not owe anything to the British Government." On the contrary the British Government owed the banks of Canada \$150,000,000, and the Dominion Government \$200,000,000 at the end of the war.

I discovered when I was Minister of Finance that the Canadian banking system is the most perfect instrument that a Minister of Finance could have at his hand in floating a national loan.

When Mr. McAdoo had his task of raising Liberty loans, and it was a heavy one, in order to get team-play on the part of the banks, how many did he have to deal with? Thirty or forty thousand individual banks, through the Federal Reserve Banks. What had I to do? Just call up on the telephone the President of the Canadian Bankers' Association: "I want all the branch banks of Canada notified to do a certain thing"—It was done. During the war I used to ask the general managers of the banks, the members of the Association, to come to Ottawa frequently. At first I fancy they came thinking I wanted to borrow large sums of money from them which I might not pay back immediately, but I had been in the financial business myself and I knew that at the start at all events you should keep your credit good by repaying promptly. I do not think there was a more surprised lot of men than they when I paid them back on the nail the first lot of Treasury Bills they took from me. Some of them told me in confidence afterwards that they really did not think I intended to pay them back until after the war. I paid them back, and so I was able to borrow the amount again before very long. My credit was good.

VALUE OF CONFERENCES

The Minister of Finance is supposed to have a special interest in the financial welfare of the country. It is to his department that all financial institutions, such as life insurance companies, trust and loan companies as well as the banks, report, that is those that exist under Dominion legislation. A Minister of Finance usually keeps in touch with the financial community. He may give them advice or seek their advice in financial emergencies. That

is a very valuable relationship, because questions arise from time to time of very great moment in the financial world—stringencies, crises, panics may occur. The relationship between the bankers and the Minister should be one of the greatest confidence. I am a great believer in conferences. If you get men together and thresh a thing out—get all their views—you are going to come to a pretty correct conclusion. Get a number of men together around a table; they give you their views and you give them yours; you check one another up, and the result is pretty sound. I have never seen it fail. Very wise counsel can be had from men with the experience of the general managers of the banks of Canada, and sometimes the Minister is able to counsel them wisely.

AFTER THE WAR

I made it my business to advise the banks of Canada, and the industrial institutions and business houses of Canada, to conserve their resources, make themselves strong, not pay out too large dividends to shareholders because they would perhaps spend it foolishly, some of them at least. I was always apprehensive of the period after the war. It has come along very much better than I thought it would, but I think only because we had taken precautionary measures to meet the situation, and had made ourselves strong in preparation to withstand the strain. Therefore all through the war, in addition to carrying on the other duties, I went outside my statutory duty to advise bankers, industrial companies and business men generally to conserve their resources as much as possible, and strengthen their reserves, because I was always afraid of an outbreak of speculation and then of falling prices after the

war; in other words, afraid of just what has happened. By taking measures to check and counteract it, by giving advice, and above all by keeping our debt funded, (not having unfunded borrowings of any amount but having a large amount of money owing to us by Great Britain) our banking position was relatively the strongest in the world after the war. In the United States the banks had to take \$5,000,000,000 of Liberty bonds, because the bond issues were put out at too low a rate of interest.

Great Britain had outstanding \$5,000,000,000 of floating securities. That amount has to come out of the money which should be available for the commercial and industrial needs of the country. But we funded all our loans, put them out spread over a long period so that there was no very large floating debt of short date maturities. All the surplus money of the banks was available for the needs of agriculture, industry and commerce. That is one of the reasons why we have come along so well during this difficult period.

Dominion and Provincial Taxation in Canada

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THE British North America Act allows the Dominion Government to raise money "by any mode or system of taxation." The provinces are permitted to levy "direct taxation within the province in order to the raising of a revenue for provincial purposes" and to enact "shop, saloon, tavern, auctioneer, and other licenses in order to the raising of a revenue for provincial, local, or municipal purposes." Before the war, the Dominion Government levied few taxes apart from customs and excise duties and head tax on Chinese immigrants. The provinces derived their chief revenue, as they still do, from Dominion subsidies, the yield from forests, fisheries, and mineral deposits, succession duties, taxes on corporations, and license fees.

Since the war, public expenditures in Canada have increased as they have in other countries. In 1913 the ordinary expenditures of the Dominion Government were \$14.89 per inhabitant; those of the provincial governments averaged \$7.08; while both together amounted to \$20.22.¹ In 1920, the latest year for which full comparative figures can be given, the ordinary expenditures of the Dominion Government had risen to \$35.20, those of the provinces to \$10.24, and both together to \$44.11. In 1922² the ordinary expenditures of the Dominion Govern-

ment had risen to \$38.76 per capita, two and a half times as much as in 1913. The causes of this increase are too well known to require comment at length. Between 1913 and 1920 the net debt of the Dominion rose from \$41.76 to \$260.56 per capita, chiefly as a result of the war, and interest charges increased from \$1.67 to \$12.47. The level of general prices also rose and carried many of the expenditures of government up with it. The wholesale price level of 1920 was two and a half times as high as that of 1913, and even in December, 1922, it was 65 per cent above the 1913 level. In addition to the after-costs of war, both Dominion and provincial governments have assumed new burdens. All have had to seek new sources of revenue.

The Dominion Government has profited by increases in the yield of customs and excise duties, but to expand its revenue it has chiefly relied upon the imposition of the income tax (introduced 1917), the business profits war tax (which yielded \$151,734,248 between 1917 and 1921, when it was dropped), various stamp taxes, taxes on banks, loan and trust companies, and insurance companies, and finally a sales tax which made its first appearance in 1920 and which has been increased several times since. The relative yield of these taxes, and the extent of their growth, may be seen from the following table.

So much is being raised by the new taxes that customs and excise duties, which formerly constituted the bulk of the revenue, now supply less than half of it. But in spite of these efforts, the

¹ Subsidies granted to the provinces by the Dominion amounted on the average to \$1.75 per capita. This sum has been deducted from the total to avoid counting it twice.

² Fiscal years for the Dominion and the provinces end at a number of different dates.

YIELD OF THE CHIEF DOMINION TAXES

(In thousands of dollars)

NAME OF TAX	1917	1918	1919	1920	1921	1922
Customs	134,044	144,173	147,173	168,797	163,267	105,687
Excise	24,412	27,168	30,342	42,698	37,118	36,755
Other taxes, "ordinary" . . . . .	.....	209	2,027	132	240	395
<i>War Taxes</i>						
Income tax . . . . .	.....	.....	9,350	20,264	46,382	78,393
Business profits	12,507	21,271	32,970	44,145	40,841	22,680
Sales tax . . . . .	.....	.....	.....	.....	27,910	61,519*
Banks	1,114	1,116	1,100	1,170	1,258	.....
Other war taxes	2,681	2,993	12,758	16,501	51,994	.....
Total yield Dominion taxes	174,845	196,930	235,715	293,707	369,011	.....

* Expected yield 1923, \$90,000,000.

national debt has increased each year since the war. Even in 1922 it increased by more than 81 million dollars—nearly ten dollars for each inhabitant. Further efforts to increase the revenue seem therefore to be inevitable. From what source is the new revenue to be sought?

INCREASE IN SALES TAX

Minor sources have been tapped by the recent legislation which increased the stamp taxes on cheques, money orders, etc., taxes on telegraph and cable messages, and various excise duties. A new excise duty on beet sugar and a stamp tax on receipts became effective at the beginning of 1923. But the most important of the recent changes has been the increase in the sales tax, which is now levied at the following rates:

- 2½ per cent on sales by manufacturers or producers to wholesalers or jobbers.
- 2½ per cent on all sales by wholesalers and jobbers.
- 4½ per cent on sales by manufacturers or producers direct to retailers or consumers.
- 3½ per cent on imported goods: but where goods are imported by retailers or consumers, the rate is 6 per cent.

The sales tax has been favorably received in Canada (so far as any new tax can be said to be welcome), and it seems to be regarded, at least by the business community, as the most promising instrument for abolishing the national deficit. Unlike the customs duties, it does not offend the free trader; its ease of collection, its dependability, its elasticity, render it satisfactory from the administrative point of view; and it receives further influential support from the belief that it is entirely shifted to consumers, does not constitute a fresh burden upon "business," and does not check the accumulation of capital. In public discussions, not much has been heard with regard to its final incidence, its justice, or its probable remote effects. The justice of a "tax in proportion to expenditure" is popularly accepted without regard to the probability that the portion of the tax which falls on producers' goods would tend in many cases to be shifted to consumers; so that the investing classes would escape a part of the burden, and the tax would in fact be regressive. Some effort has, however, been made to lessen the regressive effect of the Canadian tax by

exempting from it many foodstuffs, all kinds of fuel, and various other commodities. The probable effect of the sales tax in increasing the advantages of vertical combinations is rarely mentioned.

Nobody knows to what extent pyramiding takes place; but we have some indication of the views of Parliament in the clause which imposes a tax of 6 per cent (in addition to the customs duties) upon articles imported into Canada by retailers or consumers. Perhaps the average price of commodities is not increased 6 per cent by the pyramiding of the sales tax. If not, the tax would operate as additional protection. If the prices of commodities in general are to be increased by 6 per cent or more as a result of the tax, it seems desirable to investigate the probable effect of such an increase on different classes in the community. The absence of discussion on these lines is notable. In welcoming the sales tax, the people of Canada are diverging far from the general movement in favor of direct and progressive taxation. They are, however, collecting a large and increasing revenue; and the tax may be called "painless" inasmuch as no individual knows how much he is paying.

INCOME TAX

The most obvious alternative to the sales tax as a source of expanding revenue is the income tax. Considerable improvement has been made in its administration. The yield (in thousands of dollars) has been

1919.....	\$9,350
1920.....	20,264
1921.....	46,382
1922.....	78,393

Each year, the amount of increase has been greater. The tax is levied at the moderate normal rate of 4 per cent, with \$2,000 exemption for a married

man. The tax is progressive. It is believed that there is still much evasion.

Figures which were widely quoted in Canada, but which are too bulky to reproduce here, showed that about one person in sixteen paid income tax in the United States in 1920, while only one in forty-five paid income tax in Canada in 1921-22. With these ratios as their text, some Canadian newspapers published jeremiads about the tax-dodging in Canada which they were supposed to indicate. Like most facile international comparisons, however, this one fails to prove its point; for business conditions were probably better in the United States in 1920 than they were in Canada in 1921-22. Moreover, even had the comparison been made for corresponding points in the business cycle, it would not be surprising to find a larger proportion of taxable incomes in the more developed country. If evasion of the income tax is widespread, the argument for it, as opposed to indirect taxation, loses much of its force.

A weakness in the Canadian income tax is found when the case of the farmers is considered. Few farmers are accustomed to the elaborate methods of bookkeeping necessary to estimate their real incomes in terms of money. The checking of their statements would demand an army of inspectors. It is not surprising that the proportion of income tax contributed by farmers has been noticeably small. Perhaps the tax would be more effective if some conventional method of estimating farmers' incomes were adopted, as in England. Perhaps the farmers are already paying their share of the country's expenses through the various taxes on consumption, which they are unable to shift to consumers of farm products, in many cases, because the prices which they receive are determined in the world-market.

ORDINARY RECEIPTS OF THE CANADIAN PROVINCES PER CAPITA DURING FISCAL YEARS ENDING 1920

	Dec. 31 P. E. I.	Sept. 30 N. S.	Oct. 31 N. B.	June 30 Que.	Oct. 31 Ont.	Nov. 30 Man.	Apr. 30 Sask.	Dec. 31 Alta.	Mar. 31 B. C.
Fiscal year ends.....									
Source of Revenue.....									
Dominion Government.....	\$4.18	\$1.22	\$1.66	\$0.87	\$0.85	\$3.35	\$3.61	\$4.06	\$1.22
Natural Resources.....									
Land.....	.01	1.44	3.08	1.59	1.65	.30	.04	.56	7.06
Mining.....	.01	1.10	.09	.18	.05	.21	.....	.....	.....
Woods, forests, timber.....	.....	1.33	.09	.....	.38	.....	.....	.50	1.88
Fisheries.....	.....	.01	2.77	1.12	.18	.....	.....	.....	4.81
Game.....	.....	.....	.08	.02	.18	.....	.....	.....	.77
Taxation.....	.....	.....	.14	.08	.10	.09	.04	.06	.24
Succession Duties.....	2.86	1.87	2.47	1.97	3.40	3.43	6.01	7.09	14.73
Corporation Taxes.....	.09	.27	.24	.77	1.39	.53	.37	.47	.73
Income Tax.....	.62	.50	.51	.03	.78	1.30	.30	.78	.18
Real Property Tax.....	.92	.....	.....	.....	.....	.....	.....	.....	3.94
Personal Property Tax.....	.....	.....	.....	.....	.....	.....	.....	.....	2.25
Wild Lands Tax.....	.13	.....	.....	.....	.....	.....	.....	.....	1.87
Amusement Tax.....	.06	.31	.16	.....	.48	.19	1.40	1.45	2.22
Motor vehicles.....	.34	.51	.19	.....	.69	.57	.34	.63	.69
Other taxes.....	.70	.20	.85	.49	.06	.16	3.00	2.85	2.22
Licenses and Permits.....	.96	.86	.05	.67	.67	.04	.07	.97	.09
Liquor.....	.56	.....	.03	.35	.35	.....	.....	.88	.....
Race meetings.....	.....	.....	.....	.....	.27	.....	.....	.....	.....
Hotels and shops.....	.....	.....	.....	.67	.....	.....	.....	.....	.....
Other licenses and permits.....	.40	.86	.02	.....	.05	.04	.07	.09	.09
Administration of Justice, etc.....	.15	.20	.41	.49	.49	1.21	1.57	2.23	1.45
Fines and forfeitures.....	.....	.01	.20	.02	.03	.23	.31	.31	.....
Fees.....	.15	.19	.15	.15	.37	.98	1.30	1.92	1.17
Law stamps.....	.....	.....	.06	.32	.09	.....	.16	.....	.28
Agriculture.....	.....	.04	.01	.11	.02	.01	.05	.20	.09
Education.....	.....	.20	.07	.....	.17	.44	.04	.07	.01
Charities, Hospitals, Correction.....	.11	.97	.21	.19	.47	.33	.11	.02	.18
Interest.....	.....	.40	.06	.06	.09	1.27	.92	.32	1.45
Refunds and Repayments.....	.....	.....	.....	.07	.07	.01	.12	.16	.04
Miscellaneous.....	.05	.72	.06	.21	1.11	6.10	.93	3.49	.82
Total.....	\$8.32	\$7.31	\$8.08	\$6.23	\$8.99	\$10.49	\$13.47	\$19.17	\$27.14

STRIKING DIFFERENCES

When we pass from Dominion to provincial taxation, we enter upon a field of striking differences. Each province has built up its own system of taxation to suit its own needs, borrowing occasionally from other provinces or from the United States, or developing along original lines. The eastern provinces, older and more conservative, collect a smaller revenue per capita than the western provinces which have departed further from the *laissez-faire* tradition. Ordinary receipts or provinces from all sources in 1920 varied from \$6.23 per capita in Quebec to \$27.14 in British Columbia. The latter province has developed a very complete system of taxation. Provincial taxation varied from \$1.87 per capita in Nova Scotia to \$14.73 in British Columbia in 1920. The annexed table shows the relative importance of the chief sources of revenue in the nine Canadian provinces. This table throws no light on the relative extravagance or economy of the different governments, because the services rendered by government are more extensive in some provinces than in others.

The student of Canadian provincial finance finds a difficulty in the fact that all the provinces use different systems of accounting and classification. The Dominion Bureau of Statistics has done some very valuable work in compiling materials from all the provincial accounts and reducing them to a uniform basis on which comparison is possible. This table has been compiled from materials furnished by the Dominion Bureau of Statistics.

The wideness of the differences is noteworthy. Succession duties yield 9 cents per capita in Prince Edward Island and \$1.39 in Ontario. Corporation taxes yield 3 cents per capita in Quebec and \$1.30 in Manitoba. Two provinces have income taxes. The others have none. The rates of taxation and the methods of assessment show no uniformity. Some disquiet has been felt of late as to the effect of these differences.

A high tax on insurance companies in one province, for example, may ultimately come out of the dividends of policy-holders in other provinces. A corporation which is already taxed by the Dominion may become the victim of heavy taxation in some of the provinces, and it may even be forced to pay taxes at varying rates to different municipalities as well. Various types of unfair treatment may result from this virtual anarchy of taxing authorities. Sometimes expensive overlapping takes place. The Dominion Government and the municipalities maintain separate machinery to perform almost identical work in the assessment and taxation of incomes. There is nothing to prevent the provinces from establishing a third set of income assessment offices, and two of the provinces already collect income taxes. The Canadian Manufacturers Association has recently adopted a resolution calling for a conference between federal, provincial, and municipal authorities in order to secure greater coördination in taxation and to avoid conflicts in jurisdiction. The Canadian Tax Conference has recently been established at Toronto as a department of research in taxation. Interest in the subject is increasing.

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Municipal Taxation in Canada

By HORACE L. BRITTAIN, M.A., PH.D.

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INTRODUCTORY

THE nature of the municipal institutions in Canada varies with the different provinces. In British Columbia, municipalities are called cities and districts. In Ontario and the eastern provinces, there are cities, towns, villages, townships and counties. In the Prairie Provinces, the county unit does not exist and in place of the townships and counties, are found rural municipalities. In the province of Quebec, there exist organizations called school municipalities which in other provinces would be called school districts. In all provinces, school districts have directly or indirectly independent taxing powers.

In all Canada there are about 58 cities and urban municipalities with 10,000 population or over; 195 urban municipalities with population between 2,000 and 10,000; and 605 urban municipalities, having urban organization, with population of from 400 to 2,000. In addition there are many hundreds of rural municipalities, without including municipalities or school districts with independent taxing powers.

In Ontario all municipalities operate under a general law called The Municipal Act. Charters are not issued to cities but special provisions may be made from time to time such as, for example, that providing for boards of control of some cities of 100,000 population or over. Also special legislation may authorize cities to operate under the city manager form of government. In other eastern provinces, there are general municipal acts but special

charters may be and are granted to cities and other municipalities. These charters may provide special powers in taxation not granted to municipalities in general. In the Prairie Provinces there are usually several municipal acts. For example, in Alberta there are the Town Act, the Village Act and the Rural Municipality Act. These acts and amendments thereto may from time to time permit different forms of taxation for the different forms of municipality. It will be seen that the task of giving even a bird's eye view of municipal taxation in Canada is extremely difficult, and to give a fairly accurate account would require a much greater space than is available.

SOURCES OF REVENUE

Taxation on Real Estate.—The one tax common to all Canadian municipalities is the tax on real estate, although here there are great differences with regard to the taxation of improvements.

In Ontario and the eastern provinces, improvements are taxed at their full value or at the value which the improvements add to the land. In Manitoba, the assessment of improvements for taxation purposes on this basis is limited to two-thirds of the value, while in the Prairie Provinces and British Columbia there are great differences in practice. In general it may be said that rural municipalities in these provinces exempt improvements and in British Columbia, until recently, several cities entirely exempted improvements from taxation. Recently a report of Dr.

Adam Shortt to the City Council of Victoria recommended the taxation of improvements. In 1919, the Legislature of British Columbia amended the Municipal Act by authorizing municipalities to tax land and improvements at their actual value. In Alberta, the Town Act at present authorizes the council of a town to pass a by-law to assess and impose taxes upon buildings and improvements upon lands not exceeding their actual value. Villages may assess improvements up to 60 per cent of their actual value. All the cities tax buildings and improvements to land. In Saskatchewan, cities, towns and villages may tax improvements on lands up to 60 per cent of their assessed value. Under certain circumstances, improvements on non-agricultural lands in rural districts may also be similarly taxed.

According to the Provincial Report on Municipalities, the percentage of British Columbia municipalities exempting improvements from taxation is steadily decreasing. This seems to be true also throughout the West. In Alberta, Edmonton taxes improvements at 60 per cent of the value, and Calgary at 50 per cent, Medicine Hat at 55 per cent and Red Deer at 50 per cent. In British Columbia in the year 1918, 37 municipalities out of 63 exempted improvements; in 1919, 33 out of 62, and in 1920, 27 out of 61. The taxation of improvements in Saskatchewan cities varies between 30 per cent of the assessed value as in Weyburn, and 60 per cent of the assessed value as in Swift Current. The average is about 45 per cent.

While it is impossible to ascertain from information at present available what percentage of the total taxation is on the average raised in the municipalities of the various provinces from real estate taxation, it is within the mark to say that in many municipali-

ties of the West, from 90 per cent to 95 per cent of the total revenue from all sources is raised from taxation on real estate.

In Ontario within the last few years, permissive legislation has been introduced to encourage the building of houses, particularly under \$4,000 in value. The city of Toronto takes advantage of this legislation. The provincial law permits each municipality to levy taxes on 50 per cent of the assessed value of houses worth \$2,000. The percentages vary for different values. A house worth \$4,000 would be taxed on 90 per cent of the assessment value, while all dwellings worth more than \$4,000 would still be taxed on 100 per cent of their assessed value.

Business Taxation.—The next most general form of municipal taxation is perhaps the business tax.

In Ontario, the present business tax replaced the former personal property tax. This legislation was secured as the result of widespread agitation. The Ontario tax is based on realty values and is levied on occupiers for business purposes whether owners or lessees. The law provides

irrespective of any assessment on land under this Act (The Assessment Act) every person occupying or using land for the purpose of any business mentioned or described shall be assessed for a sum called Business Assessment to be computed by referring to the assessed value of the land so occupied or used.

Different kinds of business are assessed on a different percentage of the assessed value of the land occupied. For example, distilleries are taxed for business purposes on 150 per cent of the assessed value; breweries on 75 per cent of the assessed value; wholesale houses on 75 per cent; most manufacturing businesses on 60 per cent; department stores on 50 per cent; newspaper and

retail businesses on from 25 per cent to 35 per cent, etc. Of recent years, this form of business taxation has been under severe criticism.

The laws in British Columbia do not empower municipalities to collect business tax. The same seems to be true of New Brunswick, Nova Scotia and Prince Edward Island. In Halifax, N.S., however, a business tax is imposed under authority of provincial legislation.

The three general acts governing municipalities in Alberta make provision for the assessment and taxation of business. A municipality may elect whether the basis of the tax shall be upon rental values of premises occupied, or according to the floor space occupied by business concerns. Of six Alberta cities for which information is available, five use the rental basis, and the other the floor space basis. The City and Town Act of Saskatchewan provides for a business tax on the basis of a rate per square foot of floor space occupied. Manitoba legislation allows business taxation for cities, villages and towns. In one city of the province the business tax is on the basis of $6\frac{1}{2}$ per cent of the rental value and in another $12\frac{1}{2}$ per cent of the rental value. In Quebec, special charters in some cities provide for business taxation. According to information recently supplied to the writer, in ten Quebec cities the tax varies between 2 per cent and $8\frac{1}{2}$ per cent of the rental value of the premises occupied.

Personal Property Taxation.—Although the business tax has entirely replaced personal property taxation in Ontario, and is gradually doing so in Manitoba, many examples of personal property taxation for municipal purposes still exist. Recently in British Columbia where personal property taxation was confined to provincial government which also imposes a provincial income tax, municipalities have

been empowered to impose personal property taxation. Of six Alberta cities, with regard to which the writer has information, two receive income from personal property taxation. The Village Act and the Rural Municipalities Act of Saskatchewan provide for a certain taxation of stock in trade of merchants. In the Maritime Provinces, wide use seems to be made of the personal property tax for municipal purposes.

Income Taxation.—Municipalities in Saskatchewan, Ontario, New Brunswick and Nova Scotia are empowered to collect income taxes for municipal purposes by the general Acts of these provinces. British Columbia and Prince Edward Island have provincial income taxes none of the proceeds of which are distributed among the municipalities unless the provincial subventions to boards of education from the general revenues of the provinces may be regarded as refund from income taxation. Even in the large cities of Quebec such as Montreal there is no income tax. A Canadian citizen living in Montreal, therefore, has to pay but one income tax, *i.e.*, the national income tax, while a citizen living in Ontario or British Columbia has to pay two income taxes; in the former, municipal income tax and a national income tax, and in the latter a provincial income tax and a national income tax. The Ontario income tax, which is probably the best developed of all municipal income taxes in Canada, is not graded but exemption is allowed for unmarried taxpayers and a larger one for taxpayers who are heads of families. To the taxable remainder is applied the ordinary civic tax rate.

An idea of the relative productivity of the real property tax, income tax and business tax in Ontario, the most populous province in the Dominion, is given by the following table:

	PERCENTAGE OF TOTAL GENERAL TAXATION RAISED BY		
	Real Property Tax	Income Tax	Business Tax
Hamilton.....	83.3	7.7	9.0
Ottawa.....	79.5	11.9	8.6
London.....	82.4	7.6	10.0
Windsor.....	88.9	3.5	7.6
Brantford.....	81.9	6.7	11.4
Kitchener.....	79.2	5.5	15.3
Kingston.....	83.3	7.3	9.4
Sault Ste. Marie.....	86.9	8.5	4.6
Peterboro.....	86.1	4.8	9.1
St. Catharine's.....	83.8	6.7	9.5
Fort William.....	87.8	3.1	9.1
Guelph.....	86.7	3.2	10.1
St. Thomas.....	89.4	4.1	6.5
Stratford.....	90.4	4.1	5.5
Niagara Falls.....	90.9	1.8	7.3
Port Arthur.....	89.9	2.5	7.6
Chatham.....	87.5	3.5	9.0
Sarnia.....	88.1	4.4	7.5
Galt.....	81.8	7.3	10.9
Belleville.....	16.5	5.6	7.9
Owen Sound.....	82.2	8.5	9.3
Woodstock.....	89.8	3.0	7.2
Brockville.....	85.4	7.0	7.6
Welland.....	91.7	2.6	5.7
Toronto.....	77.5	10.5	12.0

Other Occasional Forms of Taxation.

—Examples are poll tax, service tax—Alberta—habitation tax, special franchise taxes. Special taxes on companies are found in Canadian municipalities. Most municipalities also raise revenue by way of licenses. These are, however, not strictly taxes, although in some cases they may be partly in lieu of taxation.

In Quebec, the Amusement Tax seems to be entirely for local purposes but in most Canadian provinces where this tax is in use, the tax is not only collected by the province but used for provincial purposes. Efforts have been made in British Columbia¹ and other provinces to induce the Government to turn over a certain percentage to the municipalities.

¹ These efforts in British Columbia have been partially successful.

The Automobile Tax also is a provincial tax. In several provinces the governments have been urged to give a share of the proceeds to the municipalities, but so far this does not seem to have been done.²

For the most part in Canada, city municipalities are entirely separate from counties and therefore are not liable for county rates. This is, however, not universally true. In Ontario towns also may become separated from the county but in towns which are not separate, in villages and in townships, the county rates are also applicable.

While some provinces raise money by real estate taxation, such as the Wild Land Tax and the tax on real estate property not situated within municipi-

² B. C. municipalities now receive a part of the proceeds of this tax but must spend it on roads.

pal boundaries, there is no provincial levy on the basis of the municipal assessment. At least one province must be excepted but as a general principle there are no direct provincial taxes on the citizens of municipalities and on the municipal assessments. Manitoba levies a tax on the equalized assessments of municipalities. This is collected by the municipalities.

Local Improvement Taxation.—Permanent improvements such as sidewalks, roadways, sewers, etc., are not as a rule financed directly out of general municipal taxation. In Ontario, for example, sidewalks and pavements are built on the basis of frontage, the municipality assuming the cost of

intersections and on corner lots the cost of flankage, up to one-half of its amount, not in any case to exceed 60 feet. The provisions with regard to the financing of sewers on the local improvement principle are too complicated to be outlined here. The policy of most of the provinces with regard to local improvements approximates that of Ontario.

There are wide variations in the final percentages of the total expenditure which are paid for out of general taxation and in some instances the financial principle adopted is not the same. For example, in Montreal local improvements are financed out of a sort of rotary fund which is replenished from

WHAT PER CENT ARE THE LOCAL IMPROVEMENT DEBTS OF THE GENERAL DEBTS?

(i.e., total debt less public utility debt)

PER CENT THAT L. I. DEBT IS OF GENERAL DEBT	NO. OF CITIES	PER CENT THAT L. I. DEBT IS OF GENERAL DEBT	NO. OF CITIES
16-20.....	1	51-55.....	4
21-25.....	1	56-60.....	2
26-30.....	2	61-65.....	1
31-35.....	7	71-75.....	1
36-40.....	3	76-80.....	1
41-45.....	4	81-95.....	1
46-50.....	6		
Totals.....	24	Totals.....	10

WHAT PERCENTAGE OF THEIR LOCAL IMPROVEMENT DEBTS IS BORNE BY THE CITIES OUT OF GENERAL TAXATION

PERCENTAGE OF COST BORNE BY CITY OUT OF GENERAL TAXATION	NO. OF CITIES	PERCENTAGE OF COST BORNE BY CITY OUT OF GENERAL TAXATION	NO. OF CITIES
6-10.....	2	41-45.....	4
11-15.....	1	46-50.....	4
16-20.....	1	51-55.....	6
21-25.....	1	56-60.....	2
26-30.....	3	66-70.....	1
31-35.....	4	91-95.....	1
36-40.....	4		
Totals.....	16	Totals..	18

time to time by bond issues, as necessary. The tables below will give an idea of the importance of local improvement taxation in Canada:

Legislative Limitations on Taxation.—In general these limitations are of two kinds: *first*, limitations of the tax rate; *second*, limitations of the general debt to a certain percentage of the assessed value. In Ontario the smaller municipalities are limited in their tax rate, but the limit is so high that it practically has no appreciable effect in limiting taxation. Moreover, the tax rate can always be lowered by increasing the assessment. In the cities, there is practically no limitation of taxation, except by limiting the general debt the charges on which have to be defrayed out of general taxation. Here also the margin of borrowing power can always be swelled by increasing the assessment. In some of the western provinces and in Quebec where they have strong provincial departments of municipal affairs, more or less effective

control of municipal capital expenditures and, therefore, of municipal current expenditures and the tax rate, is possible.

There is nothing in Canada to compare with the so-called Smith percentage law of Ohio with its internal limitations. The tendency seems to be towards strengthening provincial supervision. In the province of Quebec, the affiliation of all the municipalities on the Island of Montreal for the purposes of financial control of the expenditures of weak municipalities exemplifies another tendency which later, may be more or less widely copied in Canada.

Amount of Municipal Taxation.—Wide variations exist between Canadian cities as to the amount of municipal taxation imposed on their citizens. The burden of municipal taxation cannot, of course, be measured by tax rates, but only by per capita taxation. The table below will show the total per capita general and local improvement taxation for fifty Canadian cities:

CITY	TAXATION PER CAPITA	CITY	TAXATION PER CAPITA	CITY	TAXATION PER CAPITA
1.....	31.56	18.....	41.14	35.....	66.73
2.....	37.44	19.....	35.90	36.....	55.10
3.....	25.13	20.....	38.95	37.....	46.40
4.....	34.07	21.....	36.22	38.....	69.73
5.....	53.79	22.....	31.74	39.....	54.49
6.....	32.12	23.....	47.84	40.....	27.54
7.....	24.07	24.....	39.32	41.....	35.13
8.....	38.78	25.....	27.81	42.....	18.90
9.....	29.00	26.....	31.66	43.....	17.15
10.....	31.95	27.....	45.26	44.....	31.56
11.....	38.50	28.....	48.93	45.....	19.75
12.....	33.32	29.....	52.65	46.....	10.26
13.....	27.93	30.....	69.76	47.....	14.83*
14.....	25.16	31.....	58.54	48.....	29.17*
15.....	36.46	32.....	50.06	49.....	26.13
16.....	24.10	33.....	57.88	50.....	39.90*
17.....	31.40	34.....	59.44		

* School taxes omitted.

Canada's Rural Problem

By W. C. Good, M.P.

House of Commons, Ottawa

"The well-being of a people is like a tree; agriculture is its root, manufacture and commerce are its branches and its life; if the root is injured the leaves fall, the branches break away, and the tree dies."—Chinese Philosopher.

"Agriculture is not only an occupation which some individuals follow for profit, it is a great national interest determining in a dominant way the fortunes of the nation and the opportunities and the character of the population. So, while the improving of Canadian agriculture primarily concerns the farmer and his family, it affects the status of Canada, its outlook and its destiny."—Dr. James W. Robertson.

A FEW years ago the following sketch appeared in a little series of *Studies in Rural Citizenship*, prepared for the Canadian Council of Agriculture by J. S. Woodsworth:¹

A TRIP ACROSS CANADA

Nova Scotia.—Let me give a few glimpses as we hastily cross the country. Several years ago an old resident took me for a drive through an old settled part of Nova Scotia. He seemed to know the history of every farm. Perhaps it was because he was an old man, but he shook his head regretfully as he thought of the former days.

It was beautiful country. The land had produced good crops in the early days. Some farms had been "worked out." But the majority of them if they were worked properly would pay well. The milk industry had given an impetus to cattle raising and the experimental farm was gradually raising the grade of cattle and increasing the profits. But notwithstanding this, we passed farm after farm that had been abandoned. Why? Oh! the young people had gone to the States or to Western Canada. The older people grew discouraged. They could not get help. They had followed their children west, or moved into the cities, or died and left no one to take up their work. So the comfortable old homestead was left desolate.

But around some of these old homes there was every evidence of life. Who lived there? Foreigners—Poles from the mines at Sydney. They had secured enough money to get together a few things and buy or make a payment on a piece of land. Yes, some way they were making a good living as the earlier generations of French and English pioneers had done. Here, then, even in the rural districts of the far East there was beginning a foreign invasion that was quietly substituting Slavic for Anglo-Saxon stock. I had read of such conditions in New England, but here they were already in Canada.

Quebec.—Let us come to Montreal. I remember a delightful motor ride in which a French Canadian gentleman took us far out into the country. Again a fine country, splendid roads, an old settled district. A few years ago it had been well tilled, chiefly by small farmers and market gardeners. In places there were fine old country residences, but some of these were boarded up, others sadly out of repair, and field after field, formerly cultivated, was now a tangle of grass and weeds. The cause? Many of the earlier inhabitants had sold out and moved into the city or to the factory towns in the United States or further back into new territory.

Then had come a period of prosperous intensive farming. But the city had grown rapidly and extended on every side. Speculators had come in, bought

¹ Pp. 9-12.

up all the farms within a radius of many miles and subdivided them into building lots which they held at an impossible figure. Here and there a sleepy old village had sprung into life. Summer residences had gone up. Suburban trains carried many city workers back and forth throughout the year. But other districts were almost depleted. The old community life was at an end and life-long neighbors had been scattered to the four winds.

Eastern Ontario.—Another drive, this time along an old settled "concession" in eastern Ontario. My companion had been visiting his old home and during this somewhat lengthened visit had learned of all the changes and happenings in the countryside. "Do you know," he said, "I feel very lonesome now in these parts where I used to know everyone. There are hardly any of the old families left, and somehow it's a different class that has come in. In my younger days there were a dozen families on this and the next concession that formed the rural aristocracy of this district. Our grandfathers had come into the forests and cleared their farms. Then our fathers were all well-to-do. They gave us a good education. We had splendid times together. The church was strong and the center of the whole life of the community. Now, well, I went to church on Sunday and there were only a handful present. They say that the 'renters' won't support the church and the English people don't care about church." "English?" "Yes, I visited the old school. Not nearly as many as in my day, and half of them 'home children.' The servant girls are home girls and the hired men are all green Englishmen. Don't know the first thing about farming."

"But where," I asked, "have the old families gone and where are their children?" "Well," he replied, "our next neighbor moved to the village. None of the boys took to farming and we have had a succession of renters ever since. Further up the line, where you can see that big barn, the boys went out to

Dakota. The old man farmed himself for awhile. A few years ago he brought in an Englishman and his family and gave them the old house to live in and farmed on shares. He is gone; I guess the Englishman pretty nearly owns the farm by this time.

"That old place with the orchard is still in the same family, and see, they are putting up a new barn—using the timbers of the old barn. In fact, the descendants of the old timers are making things go only because they have inherited the farm. They're not making interest on the capital—that is, the most of them. A few are doing well. There's Sam McGee on the 'second line.' He has gone into thoroughbreds and is coining money, and big Dick Murphy, old Pat Murphy's son, is making a good thing out of his potatoes, but they are exceptions."

Old Ontario.—A long drive out from Toronto, past far stretching suburbs, on past the well-known village of long ago, where now an enterprising real estate agent is offering "beautiful residential lots only thirty minutes from the city," on to where "the country" used to be. But where are the old one hundred- and two hundred-acre farms of a generation ago? Gone! Now market gardens and orchards for miles, and beyond farms, but farms held by tenants—owners English or Belgian syndicates. And the old home life—much changed—much lost—much gained—hardly recognizable.

Western Ontario.—A trolley ride in Essex. The houses come in quick succession, old farmhouses and between them newer houses close to the road, and everywhere carefully worked fields with, to me, strange plants in regular rows. Not cabbage; no, these are tobacco plantations! Everyone, I am told, is going in for tobacco. Even in the towns the vacant lots are carefully planted. "Good money in tobacco and an increasingly good market."

A real estate agent, an old timer who was now acting for an American syndicate, told me of the many changes in the

district. The country was undoubtedly prosperous—a good market, and considerable capital coming in. Much land had recently changed hands. Many of the farms were bought up by American syndicates, drained and otherwise improved, and then sold to farmers from the eastern middle states, who were glad to get such relatively cheap land. Where have the farmers gone? To the Northwest and to the cities.

Southern Manitoba.—Let us follow our Canadians west. I have had numerous drives through southern Manitoba. These are old settled districts—for the West. But here, too, are changes—good railway connections, telephones in many homes, the pioneer stage passed. But the villages are stagnant and in many parts the land yielding less and less every year, and in some districts seeded down with noxious weeds. The old timers? Some gone still further west; some made their money and gone to the city to live and speculate in real estate. Tenants are careless and do not keep the land clean, nor do they take the place of the owners in the life of the community. The schools are not so efficiently manned and it is a struggle now to raise the minister's salary. In the village the retired farmers are not very keen on any improvements that will mean increased taxation. This in a young western province.

The New West.—A friend has recently been telling me of an interesting prairie farm. It consists of 64,000 acres and is owned by an English syndicate. It is under the direction of a manager, who is a graduate of an eastern agricultural college, and who draws almost as large a salary as the president of a bank. The farm is to be worked in sixty-four units of 1,000 acres each. Over each is placed a foreman, who is given an outfit of steam plows and other machinery necessary to sweep over vast acres of land. Big farms have often failed, but this is being run scientifically—a practical man at the head with plenty of capital behind him.

But what of life in that community, even if the farm succeeds financially? Ever-changing gangs of men boarded in the company's houses—camp life rather than home life. Suppose a good wage was paid, a good house provided, would you, my farmer friend, choose to establish a home for your family under such conditions? If you incur the foreman's displeasure your tenure of your home would be short. Then what about church and school and social life?

Will the industrial revolution overtake farming? A century ago the village weaver in England lived happily his simple independent life. But today his son is working in a highly specialized trade in a huge factory in the city, in the management and profits of which he has no voice or interest whatever. How will modern commercial organization affect the farmer? Why should he be so different from his brother workmen in the city? This big prairie farm starts one thinking.

Alberta.—On to Lethbridge. As we drive along we notice the irrigation ditches. We are in the dry farming district. A country apparently unproductive has been secured by great companies, irrigation introduced on a large scale and then sold off to settlers, many of them Americans. Enterprising, wide-awake people, these dry farmers. Sooner than the Easterners they will apply scientific methods and learn the value of coöperation, and yet these farms seem so wind-swept, so bare, so much alike! There is so little of the homelike, and so much talk of profits per acre. Of course, all is yet new, and community life is not fully developed. But the visitor wonders if he could become any more attached to one of these made-to-order farms than to a suite in the city tenement. Yet in the city tenement thousands live and love. Perhaps we need new standards by which to appraise these new farms.

British Columbia.—Across the mountains still other conditions confront us. I recall several drives and walks through valleys in British Columbia. Here on

bench land near the town were little clearings, each with its shack and young orchard. But out from the door came not a young Canadian, but a Chinaman. Farther down the valley a company had the contract of clearing so many acres at so much an acre. A group of dark-skinned Hindus, with their bright turbans, were clearing brush; while farther along we came upon a heterogeneous bunch of navvies armed with gunpowder and dynamite, whose task it was to blow out the stumps.

A very different method from that of the settlers in old Ontario, who if they and their boys could not pull out the stumps with a yoke of oxen, left them to rot for fifty years while they went on with their living, building their homes and rearing their families. Into these same valleys, more recently, small armies of Doukobors have advanced, clearing the land with traction engines, building sawmills and canneries and setting up their strange community institutions.

How different it all is from the quiet old homestead "down East" in which our fathers were brought up! Even in the rural districts, Canada today is not the Canada of twenty years ago.

RURAL CANADA OF TODAY

Perhaps no more fitting introduction to the study of Canada's rural problem could be had than the foregoing brief recital of actual observations. The main features of the problem are clearly shown in the picture itself, the essential truthfulness of which every competent observer will vouch for. There is no doubt that rural conditions have changed immensely in the last few decades. The Canadian farmer no longer lives a largely self-contained and self-satisfied life. On the contrary he is being rapidly drawn into the great world currents. His products are marketed in distant lands, while through many intermediaries his supplies come from afar, even from the

ends of the earth. The older homogeneous population has well nigh disappeared. Over three and a half millions of immigrants, many of them "foreigners," have entered Canada during the last two decades.² The volume of emigration, also, has been enormous, one writer placing it at over two millions for the last census period.³ There have been, also, tremendous internal migrations, from east to west and from country to city, the extent and character of which have been already dealt with in Part I.

The rural problem, however, is not coincident with rural depopulation, though the latter may be one of its aspects. Nor is it the problem of greater production, though that, too, may be involved in it. Nor, indeed, is it wholly the problem of more equitable distribution, though that, perhaps, comes nearer to a statement of the essential truth than anything else. What, then, is it?

THE PROBLEM OF FARMING

Viewed from the standpoint of the individual farmer, from that of the local agricultural community, or from that of farm technique, the problem varies much from place to place. Canada is a vast country, and it is only natural that the problems in the valleys of British Columbia should be somewhat different from those of the prairies, and they, in turn, different from those prevailing in the provinces by the sea. But in its broad outlines and viewed from the standpoint of the nation, the problem is pretty much the same in all parts of Canada, pretty much the same, indeed, throughout all English-speaking countries.

² *Some Aspects of the Immigration Problem*, by Charlotte E. Whitton, Assistant Secretary, Social Service Council of Canada, p. 3.

³ *Ibid.*, p. 3.

It has, I think, been well stated in general terms by the United States Country Life Commission, as follows: ⁴

The underlying problem is to develop and maintain on our farms a civilization in full harmony with the best American ideals. To build up and retain this civilization means, first of all, that the business of agriculture must be made to yield a reasonable return to those who follow it intelligently; and life on the farm must be made permanently satisfying to intelligent, progressive people. The work before us, therefore, is nothing more or less than the gradual rebuilding of a new agriculture and new rural life.

In his letter appointing the Commission the late President Roosevelt said: ⁵

No nation has ever achieved permanent greatness unless this greatness was based on the well-being of the great farmer class, the men who live on the soil; for it is upon their welfare, material and moral, that the welfare of the rest of the nation ultimately rests. . . . Our attention has been concentrated almost exclusively on getting better farming. In the beginning this was unquestionably the right thing to do. The farmer must first of all grow good crops in order to support himself and his family. But when this has been secured the effort for better farming should cease to stand alone, and should be accompanied by the effort for better business and better living on the farm. It is at least as important that the farmer should get the largest possible return in money, comfort, and social advantages from the crops he grows as that he should get the largest possible return in crops from the land he farms. Agriculture is not the whole of country life. The great rural interests are human interests, and good crops are of little value to the farmer unless they open the door to a good kind of life on the farm.

The above statement may be made with equal force concerning the rural problem of Canada. It is a social

problem in the widest sense and of the most comprehensive kind. It is a national problem; and it is a most serious problem, because if, under existing conditions, Canada's agriculture stagnates, our economic stability, nay even our solvency, is threatened.

In the balance of this article an attempt will be made to outline in greater detail the various aspects of our rural problem, to indicate the direction in which solutions are being sought for, and to point out some of the remedies suggested or adopted.

"BETTER FARMING" AND "BETTER BUSINESS"

There is no doubt that, speaking broadly, movements of population are due to economic causes, and that our rural problem is, fundamentally, an economic one. Unquestionably, the securing of a larger return for the farmer's labors will help solve the problem. And this return will depend to some extent on the cost of production. Now the cost of production is partly under the farmer's control. Proper methods of cultivation, improved varieties of plants, high-producing breeds of live stock, will all tend to decrease the cost of production. Knowledge of soils, crops and live stock, energy and good judgment in applying this knowledge,—all these will increase the farmer's returns, and, other things being equal, greatly assist in solving the rural problem. What has been done in these directions, through agricultural colleges and experimental stations is already set forth in this number of *The Annals*, and little further need be said here in that connection. One recent development in research, however, not previously mentioned, should be noted. I refer to the farm surveys and studies in agricultural economics, undertaken during the last few years by the Ontario Agricultural College.

⁴ U. S. Senate Document, No. 705, p. 16.

⁵ *Ibid.*

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So far as I know this is the only considerable work of its kind yet carried out in Canada. Up to date it has dealt almost entirely with the problems of production and farm management; but the scope of the investigation is being widened to include production-costs and questions of marketing, and doubtless in time there may be added an investigation of expenditures and general social conditions. The development of this work is necessarily slow, but is proceeding steadily. For details the reader is referred to the various bulletins which have been published on the subject by the Ontario Department of Agriculture.

Hitherto agricultural research and education have dealt mainly with questions of farm technique, with the application of the biological and physical sciences to farm practice,—in a word with "Better Farming." It has been discovered, however, that "Better Farming" will not alone solve the rural problem. As has been already suggested, the Canadian farmer has been drawn into the great world currents of trade. He no longer lives a self-contained economic life, but buys and sells in the world's markets. The question of price is therefore a matter of prime importance to him. High production on the farm will avail little if the farmer has to pay too much for his supplies and gets too little for his products. It has therefore been found necessary to give increasing attention to the question of marketing farm products and of purchasing farm supplies. Farmers themselves have organized, for the purpose of dealing with these matters, and the Canadian colleges of agriculture are now definitely tackling them.

Elsewhere⁶ in this volume will be found some account of the Canadian farmers' coöperative efforts. Suffice

⁶ Part VIII, pp. 233-253 inc.

it to say here that "Better Business" is beginning to attract well-merited attention.

FREEDOM FROM LEGAL EXPLOITATION

The prosperity of the farmer depends, however, not only on good farming and good business methods; it depends also on freedom from legal exploitation. For this reason farmers have recently organized to protect themselves and their industry by political action. Smarting under real or fancied injustices, and realizing that these injustices could be removed only through legislative action, they have invaded the political world, with what ultimate results no one at this time can safely predict. Questions of freight rates, tariffs, public expenditures, roads, education, rural credits, etc., etc., are all engaging the farmers' attention, and they hope to protect themselves in all these directions by political action. For details concerning "The Agrarian Movement" in Canada the reader is referred to the article on the subject in this volume.

TAXATION OF LAND VALUES

Other things being equal farmers prosper by cutting down the *cost of production*. Now one element in the cost of production is the value of the land. It is therefore apparent that "cheap land" is an aid to agriculture. This does not apply, of course, to the case of a farmer who wishes to sell his farm and retire. But it does apply to all working farmers, to farmers as farmers and not as land speculators. For this reason the Canadian Council of Agriculture has for many years advocated the shifting of taxation from labor-values—commodities—to land-values.⁷ It is claimed that the effect

⁷ The Farmers' National Platform, issued by the Canadian Council of Agriculture, Winnipeg, Manitoba.

of this change in the incidence of taxation would be to decrease the farmer's costs, both by squeezing out the speculative element in land-values and by reducing the prices of the commodities he has to buy. Further it would prevent the holding of land idle, and thus agriculture would be encouraged.

Another advantage which is claimed for the taxation of land-values is the encouragement of the purchase rather than the renting of farms. There can be no doubt that the prevalence of tenancy is destructive to good agriculture and the community life, especially when leases are for short periods. A tenant who rents a farm for a year does not, and cannot be expected to, take any adequate interest in the maintenance of fertility or in the community life. He and his family are birds of passage. They get what they can during their term of occupancy, and then move on, to repeat the miserable practice on another farm. Such conditions continue at a nation's peril.

THE FARM HOME

An extremely important aspect of the rural problem is the quality of the farm homes. In Canada, as in practically all English-speaking countries, the individual farmstead is the basic arena of farm life. Family life on the farm is therefore of greater importance than elsewhere, and especially pronounced is the influence of the farm home, for weal or woe, upon the rising generation.

No comprehensive surveys of Canadian farm home conditions have been made. Few thoroughgoing local surveys have been made. Conditions vary very much from place to place, so that it is impossible to generalize. It is safe to say, however, that the lot of the farmer's wife is a peculiarly hard

one. She has not only to do the ordinary housework, and often without the help of other human hands or labor-saving devices, but she has also to bear and rear children, and frequently share in the farm work outside,—milking, gardening, looking after poultry, etc. So far as convenient up-to-date houses and labor-saving devices are concerned, it is almost wholly a question of being able to afford them. No doubt some general progress in this direction has been made during the last few decades, but as compared with city homes and city conveniences, the Canadian farm home is deplorably lacking.

COÖPERATIVE OWNERSHIP

The coöperative ownership and operation of labor-saving devices for the farm home is practically nonexistent. There are a few coöperative laundries and canning factories in rural districts, but nothing else as far as I am aware. The individual farmstead type of land settlement makes it somewhat difficult to develop these activities. That and an individualistic viewpoint seem to constitute our greatest difficulties.

HYGIENE AND SANITATION

As for the question of health in the rural districts there can be little doubt that the cities have made greater advances than the rural districts in hygiene and sanitation. There is, however, in the country, a growing knowledge of the dangers of water contamination; but too often risks are run by the individual family which the city community cannot afford to take. With the best possible opportunities of securing fresh air, sunlight, and good food, it is to be regretted that there are still many rural residents who suffer from lack of ventilation and from contaminated food and water. There is much room for improvement, also, in the care of children, and in the adop-

tion, both for old and young, of a simple, varied, and nutritious diet. Too often "tastiness" rather than wholesomeness and cheapness is the dietary determinant, though perhaps this may be said of the city as much as of the country.

WOMEN'S ORGANIZATIONS

In all matters concerning the farm home a variety of women's organizations are doing valiantly. In Ontario the Women's Institutes—whose motto is "For Home and Country"—and more recently the United Farm Women, have done, and are doing, most excellent educational work. In Western Canada, also, there are provincial farm women's organizations whose activities are of a similar nature, while elsewhere are local organizations of like character in many places. The Provincial Departments of Agriculture and Education are also engaged in educational work of the same sort.

EDUCATION

An immensely important part of our rural problem, and as yet scarcely touched, is that which relates to education. In the first place there is the extension of agricultural education. The agricultural colleges can only directly affect an exceedingly small percentage of the young people in the rural districts, even when short courses and other devices are included. What means are to be taken to make available, at the right time, and in the right place, the extremely valuable information and inspiration which our agricultural colleges and experimental stations can impart? Here is a tremendous problem which awaits investigation and solution. In the second place and not wholly unrelated to the foregoing question is the provision of secondary and higher education in and for the country. So long

as 'teen age boys and girls must leave their homes on the farms and go to the cities for their schooling, the situation is bound to be unsatisfactory. To meet the need in this case the consolidated school would seem to be appropriate; but as yet in Canada there has been comparatively little progress in this direction, Manitoba probably standing to the fore. In the third place there is the question of an education "for Country Life," technical and vocational in a measure but not thereby ceasing to be cultural in the broadest sense. In this connection the Danish School System deserves special attention, but very little general consideration has been given to it as yet.

Other minor questions connected with rural education are school organization, administration, and inspection; school taxes; the prevalence of young and temporary female teachers; teacherages; etc., etc.

RELIGION AND MORALS

And now what of religion and morals in rural Canada? "The Community," says Dr. Anderson, "needs nothing so much as the church, to interpret life; to diffuse a common standard of morals; to plead for the common interest; to inculcate unselfishness, neighborliness, coöperation, to uphold ideals and to stand for the supremacy of the spirit."⁸ What of the rural church?

Here again we have little or no comprehensive and exact information. In many localities the rural church continues to flourish with undiminished vigor, but in other places it has disappeared or dwindled in importance.⁹

⁸ "The Country Town," by W. L. Anderson, quoted by Woodsworth in his *Studies in Rural Citizenship*, p. 48.

⁹ *Rural Life in Canada*, Rev. John McDougall, pp. 49-53.

In fact there is good reason to believe that rural church decadence has accompanied rural depopulation, and that rapid immigration and emigration have not assisted in maintaining church stability. Then, too, sectarianism in the open country is both financially and spiritually far too expensive to continue, and only now does church union offer an adequate remedy. If the church is to become a community force it must become united because the function of the church is to interpret, harmonize and spiritualize all community activities. No real and adequate community life can co-exist with sectarianism. In respect to church federation and church union, however, the prospect in Canada is at the time of writing, decidedly hopeful, since three of the Protestant churches in Canada are in process of uniting.

WORK OF SOCIALIZATION

Considerable attention has been directed in recent years to the "Socialization of Rural Communities." Certain it is that the economic salvation of the Canadian farmer depends to a very large extent upon his capacity to coöperate with his fellow farmers in various directions; and equally certain that associative intelligence can only be developed by community activities. It is obvious, also, that if the farmer is to escape the mental and spiritual domination of the city he must not follow a policy of seclusion and exclusion, but must increase the variety and number of his contacts, so that, in short, he may gradually become a citizen of the world. In this process of widening contacts community activities constitute the first and most important part.

► In the process of community socialization many institutions and organizations function. The home, the school,

the church, the coöperative society, the farmers' club, The Women's Institute, the literary society, the football league, —all these help in the work of socialization. I think, too, that the advent of Rural Free Delivery as well as the general prevalence and use of telephones and automobiles in rural districts is assisting in the process, in spite of the fact that there is, perhaps, less leisure on the Canadian farms now than forty years ago.

RELATIONSHIP BETWEEN RURAL DISTRICTS AND TOWNS

An important phase of our rural problem arises out of the fact that the economic community does not coincide with the legal community. There is surrounding practically every town a rural district which is tributary to that town. The town exists, in fact, as the economic center of the surrounding farm land. But in the government of that town the surrounding farmers have no share. It is separately incorporated, and from its own residents are chosen the town councillors. Not only has the farmer no share in the government of the town which is the product and center of his own activities, but he is denied an adequate share in the social, educational and other advantages of the town. Nor has he any compensation in his own legal community—the township—which signifies little to him as a community. The difficulty is not an easy one to remedy, but a way out should be looked for.

In the socialization of rural life it is important, in the writer's opinion, to have some geographical centralization. At present, unfortunately, our community life is weakened by being too much split up. The local school is the center of some activities, the local church of others. Others, again, center in the nearby town or village, while

others attach to the township. With small schools and competing churches, the situation is well nigh hopeless. School consolidation would seem to provide a center for all educational, recreational and religious activities, while the coöperative economic activities could find a natural business center in the nearby town. Development in either direction has been slow. Concerning it the reader may consult Chapters III and VIII.

INDUSTRIAL CHANGES

Another aspect of our rural problem has been the transference of local industries and handicrafts to the larger cities. McDougall refers to this,¹⁰ and Harpell has the following to say:¹¹

In order to understand the effect which this process of elimination has had upon the country one requires to visit the thousands of villages and towns, which but a few years ago were thriving places, possessing many promising young industries that at least supplied local requirements and by the labor they employed provided an important market for the agricultural products of the community. Today many of these places are dilapidated and half deserted. The machinery in the plants lies rusting. The neighboring farmers, instead of butchering their cattle, hogs and sheep for the local market are compelled to sell on the hoof for what they can get from the large slaughtering houses and packers. Their grain is also exported as it comes from the thresher instead of being ground, as it used to be, for home consumption, at the local gristmill, which has also been closed up in many cases. Thus the farmers' products are shipped out of the community in the rawest condition, while the finished articles they require are shipped back to them.

¹⁰ *Rural Life in Canada*, Rev. John McDougall, p. 57, et. seq.

¹¹ "Canadian National Economy," J. J. Harpell, quoted by Woodsworth in his *Studies in Rural Citizenship*, p. 34.

It is doubtful whether these changes are wholly in the direction of economy. Certainly they give the middleman an opportunity of fixing prices, both in buying and selling; and perhaps the few gain at the expense of the many. But, however that may be, there is little doubt that such industrial changes contribute to the impoverishment of rural social life.

RURAL CREDITS

The banking system of Canada has been already dealt with, but this article would be incomplete without some slight reference to the question of rural credits. Both in Ontario and Manitoba the provincial governments make provision for long and short term loans to farmers, and also take savings on deposit, which activities have not escaped hostile criticism from the chartered banks. It is likely, however, that the extension of credit by the community will continue to expand, particularly in view of the economic distress which has accompanied post-war deflation.

For the solution of the rural problem the farmers themselves must be primarily responsible. An era of farm organizations is already under way. These will be the chief instruments in the reconstruction of rural life. Of such Professor Mann says:¹²

The new organization will largely be farmer made and controlled. It is the stage of organized self-help. It will be marked by an apparently rapid shift from individualism to social consciousness and sense of co-partnership. The welding process is on. Group spirit is accumulating. Farmers as individuals will become less independent; farmers as a class will become more independent. Evidences of personal

¹² Report of American Sociological Society, Vol. XI, p. 69.

and group power, large grasp, and achievement will be outstanding. In reality the farmer will be seen coming into his own. Leaders of this awakened rural manhood must be clear-thinking, direct, and of su-

perior intelligence; and their foundations must be laid in a sure understanding of economic and social laws and of folk psychology, super-imposed on reliable farm knowledge.

Agricultural Coöperation in the Canadian West

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THE PRAIRIE PROVINCES AND IN PARTICULAR MANITOBA AND ALBERTA

HISTORICALLY the coöperative movement on the prairies is a confluence of two streams—the informal coöperation of farmer pioneers, and the dissatisfaction of the wheat grower with the treatment received from the railway companies and line elevators. The pioneers helped each other at barn-raising, and thrashing bees. Being often far away from a railway they organized Beef Rings, taking turns to supply a whole animal which when divided up among the members secured to each a regular supply of fresh meat throughout the season. Many such rings exist today. But if the provision of fresh meat was a convenience, the satisfactory disposal of the wheat crop was a pressing necessity; and after the Manitoba Grain Act of 1900 had given to the farmer the right to a car, in his turn, and freedom of shipment over the platform, neighboring farmers banded together to fill the car allotted to one of them. In 1901-2 grain growers associations sprang up to enforce and improve the Grain Act. From protest they proceeded to investigation and from investigation to action, forming in 1906 at Winnipeg, The Grain Growers Grain Company.

RELATIONSHIP FAIRLY UNIFORM

The relation between the Grain Growers Associations and the various farmers' companies or coöperative societies since formed in the Prairie Provinces is fairly uniform. Constitutionally the two are quite separate, but both at headquarters and at local

points the prominent members of the Grain Growers Association are also prominent members of the coöperative organization. Since the entry of the farmer into politics (and by the end of 1922 all three provinces had farmer governments) leading coöperative officials had been called upon to assume high executive office in the several governments. In this respect the Prairie Provinces have broken new ground, which is the more instructive in view of the fact that the British coöperative stores after a strict tradition against political action extending over seventy years decided in 1917 that "the time has now arrived for the Coöperative Movement to take the necessary steps to secure direct representation in Parliament." Believing themselves to be faced with the choice between stagnation and a breach with tradition British coöperators preferred the breach.

To those who are attached to a rigid two-party system and remember the shipwreck of earlier farmers' movements on politics a similar choice by the farmers of Western Canada may seem hazardous. But it is necessary to look beneath the surface. The danger is rather that where the coöperative movement is young the absorption of its members in politics may starve the coöperative effort at its most vital point, the local association, and throw upon the central executive the impossible task of managing with success a federal machinery unsupported by district loyalty. If politics are to react favorably on coöperation, it must

be by the stimulus to local keenness; and the stimulus must be applied with such tolerance that those who belong to a different political party will have no cause to be estranged from coöperation as an economic endeavor.

AMALGAMATION AND WORK

In its first season (1906-7, ten months) the Grain Growers Grain Company handled over two million bushels of grain, the whole on commission; in the year ending August 31, 1916, during which the bumper crop of 1915 was marketed, the company handled 48,000,000 bushels, 30 through its commission department and 18 through its country elevators. At first no member might hold more than four shares, but in 1911 in view of the extension of trading activities, wider charter powers were obtained from the Dominion Government, and the maximum was increased to 40, but the rule of one man one vote still obtains. By 1916 the company had 18,731 shareholders scattered over Western Canada (Manitoba 8,655, Saskatchewan 7,246, Alberta 1,356, elsewhere 1,474). In June, 1917, the Grain Growers Grain Company amalgamated with the Alberta Farmers Coöperative Elevator Company, which had been established under provincial charter in 1913, on the plan of the Saskatchewan Company hereafter described.

The new style of the company is The United Grain Growers Ltd., Mr. T. A. Crerar, who had been President of the Grain Growers Grain Company since 1907, becoming President of the united company, and Mr. C. Rice Jones, who had been a director of the Alberta Company, becoming First Vice-President. The amalgamation was beneficial for two reasons: (1) It eliminated overlapping in Alberta, and facilitated the integration of functions between

the rapidly growing mixed-farming province of Alberta and the metropolitan market of Winnipeg; (2) it was the occasion of introducing into the parent organization a more thorough local system, the shareholders in each locality being henceforth represented through delegates at the annual meeting on lines similar to those employed in the federation of stores which compose the English Coöperative Wholesale Society. The Saskatchewan Coöperative Elevator Company (*see below*) retains a separate existence, though proposals have recently been entertained for joint action in the export business.

The Grain Growers Company began with sale on commission. In 1908 it entered the export business. In 1912 it undertook the operation of terminal and country elevators, leasing a terminal elevator at Fort William from the Canadian Pacific Railway and taking over the country elevators which the Manitoba Government had erected in 1910, in response to strong pressure, but had operated at a loss. The company subsequently built terminal elevators of its own, and the United Grain Growers now own and operate both terminal and country elevators, in addition to operating the country elevators leased from the Manitoba Government. In 1912 the company began to handle supplies, acquiring a timber limit in British Columbia with a view to the provision of building materials, leasing a flour mill in Manitoba and acting as agent for the purchase of fruit and coal in carload lots. Then followed wire, binder twine, machinery and other farm supplies. Still more recent is the marketing of live stock on commission, for which purpose a new department was opened in 1916 with an office at the Union Stockyards at Winnipeg; and to secure coördination at the point of original

shipment, live stock shippers' associations have been organized. Alberta, the leading cattle province, entered the field of coöperative cattle marketing as early as 1914, and today the United Grain Growers head the list of shippers in the leading cattle markets of the West. Of the cars handled by all firms in the year 1920-21, the United Grain Growers had at Winnipeg 18.7 per cent, at Moose Jaw 41.4 per cent, at Calgary 31.1 per cent, at Prince Albert 47.6 per cent. At Moose Jaw and Prince Albert they have offices in the coöperative stockyards organized by the province of Saskatchewan. As now constituted the United Grain Growers Ltd. consists of: (1) The main company with its several departments—grain (elevator and commission), terminal elevators, live stock, farm machinery and supplies, accounting, organization (including propaganda, advertising, mailing lists and shareholders' files); (2) the following subsidiary companies—Grain Growers Export Company Ltd. (Canadian Company), Grain Growers Export Company Inc. (New York Company), Grain Growers Guide and Public Press Ltd., United Grain Growers Securities Ltd., (insurance department and land commission agency), U. G. G. Sawmills Ltd.

The general balance sheet for the year ending August, 1921, showed a net profit subject to taxes, of \$233,000, as compared with \$467,000 for 1920, and \$148,000 for 1919, and this sum after provision for reserves and educational grants allowed of a 6 per cent dividend. The main profits have been made on the grain and live stock business, the other departments being less successful, and some of them showing substantial losses. Thus the general experience of European countries that coöperative supply is easier to handle than coöperative sale is re-

versed: and for this there are definite reasons. The better marketing of grain was the *raison d'être* of the company's existence. The farmers felt themselves to be exploited by existing organizations, and gave the company all the custom that it needed. It only remained for the company to become as efficient technically, or approximately so, as existing private concerns.

OBLIGATIONS AND LIMITATIONS

The established marketing structure being elaborate and highly specialized, the company had to accommodate itself to this fact. It had to offer to the farmer outright purchase, sale on commission, purchase subject to grade, special binning and so forth; and as the operator of country and terminal elevators, it became subject to the same obligations to the general public as private concerns. It could not secure contracts for the whole of its members' crops, as the coöperative fruit growers' organizations have done, for not only were its members too vitally interested in the price of their main crop and, in many cases, under the necessity of turning it into cash as soon as possible, but furthermore the handling of the wheat crop on the pooling system would have been an operation of such magnitude as to be of doubtful success. The company therefore confined itself to what was practicable. At local points it gave improved services and brought down charges: at the central market it watched the farmers' interests, investigating complaints, and helping to dispel the irritation of the producer with machinery which from its intricacy seems to him mysterious and malevolent. Where it could it rendered new service. For example, its representative in the Government Grading room on the top floor of the Winnipeg Grain Exchange unofficially

inspects the samples of wheat belonging to the company or to individual members, after the grade has been assigned, and asks for a reëxamination when there is a prospect of its being raised.

But when it developed the export business it could not adopt the simple plan of handling only its own wheat any more than the Scottish Coöperative Wholesale Society can convey to its members the actual wheat grown on its farm at Hughton in Saskatchewan. Thus the Grain Growers Export Company of Canada buys from outside parties, as well as from the parent company; but it does not get the latter's wheat unless it bids up to the top price, and it could not conform to the lightning rapidity and fractional profit at which business is done, unless in its turn it were free to take grain from any source that offered.

LACK OF SUCCESS IN SUPPLY

The comparative lack of success in supply appears to be due to the following causes:

(a) In the case of the U. G. G. Sawmill. A harvest failure may so reduce the farmers' buying power in the prairies in any particular year that there is little or no demand for lumber from that source. When it endeavors to find outside markets for its products, it must either enter a new and difficult export trade, or turn to the domestic retail trade which is hostile to it on account of its past activities in the direct marketing of carload lots.

(b) In the case of farm machinery. The company finds that established machinery companies which already possess their own retail distribution service—and the ubiquity of this service is one of the most striking facts in the Canadian West—are unwilling to hand over this service to it. The obvious retort would be to enter into production; but on the North American continent the unit of production in this industry is very large and the market which each concern supplies extends from coast

to coast. When a failure in the wheat crop reduces buying power in the provinces, private concerns may find a good market in Ontario, or British Columbia, and when the agricultural demand is poor generally, they have an alternative in the supply of machinery for road construction, with which the manufacture of ploughs and tractors is technically allied.

(c) In the case of minor farm supplies and general necessities. No insuperable technical difficulties are present here. But there is one prerequisite of success, namely local enthusiasm which will guarantee loyal patronage from members and adequate supervision by them of their local business. This has often been lacking partly because the locals have been more interested in breaking prices than in forming an enduring society, and partly because of the dependence, voluntary or otherwise, of a scattered farming population on the one or two existing stores in each little prairie town.

WORK IN SASKATCHEWAN

When Saskatchewan was made a separate province in 1905, it possessed already a number of coöperative creameries, which had been organized by the Dominion Dairy Commissioner, and a number of Grain Growers Locals which purchased farm supplies in carload lots. The agitation of the Saskatchewan (originally "Territorial") Grain Growers Association for improved marketing facilities led to the appointment of a provincial commission which reported in favor of a coöperative elevator system with groups of shareholders responsible for the elevators in their locality and a central company in charge of the whole, the Government to advance 85 per cent of the capital repayable in 20 annual instalments with interest at 5 per cent. An act embodying these recommendations was passed in 1911, and the same year saw the institution of municipal coöperation hail insurance under a Hail Insurance Commission.

In 1913 a special branch of the Department of Agriculture was created to promote the formation of coöperative societies for purchase and sale, and the Agricultural Coöperative Associations Act was passed. The first societies to register under it were the Grain Growers Locals which had hitherto traded in farm supplies without adequate legal status. Since that date the range of activities has been extended till there are now 450 associations engaged in business under the Act, the majority being supply societies, while of the balance 60 are engaged in the coöperative shipment of live stock. In 1917 under the Saskatchewan Coöperative Creameries Act the separate coöperative creameries became members of the Saskatchewan Coöperative Creameries Ltd., which took over the functions of the Government Dairy Branch, by whom the entire output of the creameries had been marketed hitherto. In 1921 the title of the "Coöperative Organizations" Branch of the Department of Agriculture was changed to that of "Coöperation and Markets," the branch being entrusted with the administration *inter alia* of the Egg Marketing Act of 1920, which provides that "no person shall buy for resale or sell eggs unfit for human food."

DISTINCTIVE FEATURES

The distinctive features of the coöperative movement in this province are (1) the large measure of financial support given by the provincial government to specially constituted coöperative undertakings, in particular to the elevators and creameries; (2) the thoroughness of local organization; (3) the excellent annual reports of the Coöperation and Markets Branch, from which the following details are selected:

(a) *Saskatchewan Coöperative Elevator Co. Ltd.*—On the average of 1917-

22, 314 elevators handled 27 million bushels of grain per annum; in 1921-2, 37 millions, on which a profit of \$463,000 was earned, allowing it a distribution of 8 per cent on fully paid shares with a bonus of \$3.50 per share. The company operates terminal elevators with a total capacity of 5,300,000 bushels, and has its own offices on the Winnipeg Grain Exchange.

(b) *Saskatchewan Coöperative Creamery Co. Ltd.*—The butter output increased by 85 per cent during the period of the war, and between 1919 and 1922 the manufacture of butter has averaged 3 million pounds per year. The excellence of its grading has won it a high place on the export market. In addition the central establishment operates a big ice-cream plant at Regina, as well as several cold storage plants, and markets a considerable quantity of eggs and dressed poultry.

(c) *Saskatchewan Grain Growers Association (Trading Department)*.—This department made rapid progress during the rising prices of the war period, but the cancellation of binder twine orders by the locals, as the result of the crop failure of 1918, necessitated a heavy bank loan. In the year 1920 the total turnover of the Trading Department was \$1,500,000: coal, binder twine, fencing material, and farm machinery being the main supplies handled.

(d) *Saskatchewan Municipal Hail Insurance Association*.—Between 1912, the year of inception and 1918, the Association suffered two serious setbacks—one in 1916 when it was possible to pay only 40 per cent of the total indemnity due to the claimants, and the other in 1918 when only 80 per cent was paid. To meet this defect amending legislation was passed in 1919, which permits an additional levy on the acreage under crop, over and above the flat rate, in order that funds shall be available to pay the

claims in full in any year. But for this amendment the Association could not have met more than 25 per cent of the claims payable in 1919, which reached \$4,000,000. In a light year when the flat rate suffices, the premium paid by the farmers is about half that charged by outside companies, but against their low rate must be set the uncertain levy of years when losses are heavy. Whereas other forms of co-operative organization can claim to render services at least as complete as those rendered by private concerns, the scheme of municipal insurance clearly falls outside this category.

(e) *Saskatchewan Coöperative Stockyards*.—Following upon a commission of inquiry in 1915 coöperative stockyards were opened in 1920 in Moose Jaw and Prince Albert. In 1921 2,700 cars of live stock were received and over 2,500 cars disposed of. It is hoped that with the growth of local live stock shipping associations, these latter will become the regular channel for shipments to the central stockyard.

(f) *Canadian Coöperative Wool Growers Association Ltd. (Saskatchewan Branch)*.—This enterprise shows the same sequence of development as the coöperative creameries. It was started in 1914 by the Department of Agriculture acting as a wool marketing agency. Experts from the Dominion Live Stock Branch worked out a system of wool-grading; and

a comparison between the prices received for graded and ungraded wool makes it quite evident that any additional expense incurred in grading was many times offset by the increased price of wool. (Report of 1916-17, p. 30.)

In 1920 negotiations with the Canadian Coöperative Wool Growers Ltd. (headquarters, Toronto), concluded with the handing over of the work to that body, which thereupon opened a

western office at Regina, and now markets the majority of the 1,000,000 pounds of wool produced in Saskatchewan. A first payment is made when the wool is shipped. It is then sold, the greater part of it in June and July; and a final payment is made later, the amount of which is dependent on the grade of wool, ranging in 1922 from 2 to 10 or 12 cents per pound.

PART PLAYED BY PROVINCIAL GOVERNMENT JUSTIFIED

To sum up, the generous financial assistance given by the provincial government toward the formation of special marketing organizations for the leading agricultural products of the province has been accompanied by intensive propaganda designed to build up a keen local spirit. As a result the older established organizations are gradually approaching to a position of financial independence. The necessities of a new province justify the largeness of the part played by the government in the initial stages, but any slackening of endeavor towards the attainment of independence would be prejudicial to the spirit of self-help through voluntary association which is the hall-mark of genuine coöperation.

BRITISH COLUMBIA

In 1896 the coöperative movement began to take definite shape in British Columbia. The Registration of 1897 comprised:

(a) The Farmers' Institutes and Coöperation Act, under which a number of institutions similar in structure to the agricultural syndicate in France and Italy were formed. Their chief purpose was the encouragement of improved husbandry, but many of them, like the syndicates in southern Europe, informally conducted a considerable business in the purchase of agricultural requisites in carload quantities.

(b) The Coöperative Associations Act, under which a number of general stores were opened, all of them short-lived, and contrasting strongly with the later success of the milk producers' locals where farm supplies are operated as a back line to the marketing of a special commodity.

(c) The Dairy Associations Act, under which some of the chief creameries now in operation, such as Comox and Cowichan, were incorporated.

Further legislation in 1911 provided for the formation of associations with share capital supplemented by government loans to the extent of 80 per cent of the subscribed capital. Under this most of the fruit marketing organizations were incorporated, their need of capital for the erection of cold storage plants being urgent. In 1915 this act was repealed and in 1920 a general act was passed, the Coöperative Associations Act of 1920 which brings all co-operative associations in the province into line and makes them dependent for the future upon their own resources for the provision of working capital.

FRASER VALLEY MILK PRODUCERS' ASSOCIATION

Of these various associations the most signal financial success has been achieved by the Fraser Valley Milk Producers' Association, which was formally incorporated in 1913. The Association now controls the milk supply of Vancouver with advantage, it is claimed, to the consumer, as well as to the producer. "Milk has been selling in Vancouver at the lowest price of any city in Canada, except perhaps Ottawa, which has practically the same price" (*Agricultural Journal of British Columbia*, June, 1922, p. 101). The Association achieved its success by stages. In 1913 the milk producers were a disorganized aggregation, each so uncertain of the price he would get

that he saw little profit in building up a good dairy herd. By 1916 the Association was strong enough to sign up 80 per cent of the milk producers before arranging a price with the milk dealers in the city, and dealers who tried to entice individual suppliers into private terms were forced by the loyalty of members to fall into line with the Association.

Finally the Association went one step further and itself entered into the retailing of milk. The plant of existing distributors was taken over at a valuation and considerable economies were effected in distribution, 60 wagons doing the work that had formerly been done with much overlapping by 120 rigs. Creameries and an evaporated milk plant were opened, in order to handle the surplus of the summer supply, but all producers are paid the pool price, independent of whether the milk is used for consumption as milk, or for manufacture as butter, cheese, evaporated milk or ice cream. Successful in milk distribution, the directors in 1919 turned their attention to the supply of feed, organizing for the purpose 16 locals, each with their own capital, but all in union with the central office which acts as wholesale agent. Collections of feed to the locals are made by deductions from the milk cheques, due to the individual farmers; and by means of transfers in the accounts at head office, one local can supply another from its surplus.

STRENGTH OF CAPITAL

A notable feature of the Society is the strength of its capital, none of which has been advanced by the Government, and as this capital is withdrawable (i.e., not transferable), none but members actively engaged have a share in the management of the Society. Starting with a capital of \$40,000 of which 20 per cent was in

cash and the remainder in notes payable in instalments, the Society had in 1921 a paid-up capital of \$489,220 on which (including milk sales and purchases for patrons) it did a trade of \$6,000,000. It was fortunate in growing to maturity during the high price period of the war, but whereas so many farmers and farmers' organizations treated their abnormal earnings as income, this Society kept a great part of them back, and distributed them in the form of successive stock dividends, which enabled it to extend its operations in the way indicated above. No less than three fifths of the capital was thus accumulated.

The need of the fruit growers for a more efficient system of marketing was at least as urgent, but their technical problem was more difficult and they lacked that steadiest of all cash producers, the milk cow. Whereas in the Fraser Valley Milk Producers' Association the individual suppliers are the shareholders of the central, the locals being only subsidiaries for the supply of feed, among the fruit growers the relation between the local fruit unions and the central sales agency (The Okanagan United Growers Ltd.) is a federal one.

TYPICAL FRUIT UNIONS

Among typical fruit unions are the Vernon Fruit Union, the Sumerland Fruit Union, the Kelowna Growers and Exchange, and the Penticton Growers Exchange.

The Vernon Society leads in point of size, having a subscribed capital of \$57,000 of which approximately \$20,000 is paid up. It marketed products of the value of \$826,000 in 1921, and furnished its members with supplies valued at \$310,000 (sprays, fertilizers and packing materials). Sumerland and Kelowna come next, each with sales of about one half a million dollars,

and tradings accounts of about one quarter of a million. The Penticton Society makes a specialty of shipments by express direct to consumers on the prairies and elsewhere, sales under this head amounting to \$31,000 (1921) out of a total of \$180,000. The Peachland Society is a much smaller concern, and, as the name suggests, the leading small fruit shipped by it is peaches. But it is under the handicap of having no frost proof storage facilities and uses an old implement store as its fruit warehouse (1921). Apart from size, these fruit unions are almost identical in their nature. They were started in 1913, under the Act of 1911, which advanced 80 per cent of the capital (to be repaid by a sinking fund), and the lack of paid-up capital has been a source of difficulty in financing extensions. Thus the Sumerland Society carries a business of about \$750,000 on a subscribed capital of \$22,000 of which only \$4,730 is paid up, though this does not include the \$5,000 paid-up capital of the subsidiary storage company.

The chief crop in all the societies is apples, and the members bind themselves to make delivery of their produce by a contract which in Sumerland is yearly, while in Kalowna it is now a five-year contract, and in Penticton it contains a special clause which makes the growers personally responsible to the banks for amounts borrowed. Each society has its warehouse or warehouses, motor trucks and packing equipment. Each has also the services of a subsidiary fruit storage plant which is incorporated as a separate concern with its own capital. The several societies by no means control the whole of their output. Thus in Penticton, "the acreage in orchard is about 1,100 acres of which about 50 per cent is marketed through the Association representing about 120 growers" (*Agricultural Journal of British*

Columbia, August, 1922, p. 124). The collapse of prices since the war has proved a heavy strain on the loyalty of patrons. Thus "the Vernon Fruit Union has had to meet disloyalty among its patrons owing to dissatisfaction with the results attending the operation of the central selling agency" (*Agricultural Journal of British Columbia*, November, 1922, p. 196).

The Okanagan United Growers (Ltd.) is the central selling agency for the local unions which form its members. It is a non-profit agency with a nominal capital, and its working capital is supplied by a levy, in the form of an interest-bearing loan deducted from the amounts due to shippers on account of sales. By this means it has been able to finance the distributing business and also to invest in subsidiary concerns: the O. U. G. Fruit Products Association which operates a plant for canned and evaporated fruits and the Growers' Sales Agency which controls the selling system of the agency on the prairies and in American centers—the agents canvassing the fruit trade on a basis of salary and commission. In addition, it acts as wholesale agent for the distribution of growers' supplies to the local unions.

HOW FRUIT IS PAID FOR

The payment for the fruit is arranged thus: When fruit is ready for shipment the central selling agency instructs where it is to be shipped, and during the season advances to the locals sums aggregating 60 per cent of the estimated realizable value of fruit under contract in the district. Final settlement is made at the close of the selling season. When such time arrives the central selling agency determines the value of the fruit handled for each local organization, and deducts therefrom the value of the growers' supplies and cash advanced, remitting the

balance to the shipping association, which in turn adopts the same method in dealing with the individual growers. In 1921 the agency marketed products to the number of 1,800,000 packages valued at \$2,200,000 approximately, to the exclusion of a quantity of bulk fruit converted into manufactured products (evaporated fruits, jams, and preserves). The sale of growers' supplies to the various locals amounted to \$340,000, making the total turnover of the agency slightly over \$2,500,000.

COMMODITY MARKETING

British Columbia, like Denmark and California, is a country of specialty farming, and in such a country, co-operative effort is wisely concentrated upon commodity marketing. This does not exclude coöperative supply, which is operated economically as a return traffic, through an organization primarily created for the marketing of a graded product. In the case of the Fraser Valley Milk Producers' Association coöperation extends as far as retail distribution, but when the product, as in the case of Danish dairy produce, or fruit grown on the North Pacific coast has to be marketed at a distance, it is usually advantageous to leave to "the trade" the work of wholesale and retail distribution in the region where the produce is consumed. Fruit is a product which if carefully graded can build up the reputation of the district where it is grown. The product can be named, and the market extended by judicious advertising.

But the best financial results cannot be received by the grower unless the sales agency markets a sufficient proportion of the entire tonnage to control effectually the distribution. As the directors of the Okanagan United Growers say in their report for 1921:

At the present time we are in the position of having a very heavy tonnage to dis-

tribute without having a sufficient percentage to exercise control over distribution. . . . The fundamental defect in the organization as it stands today is the inadequate control of a sufficient tonnage to insure best results.

This defect has been overcome in the older organizations of California fruit growers; and suspicion that this

control, if obtained, might be employed monopolistically should be appeased by the following considerations:

(1) Membership is open to all growers and no attempt is made to restrict the amount of fruit which is planted. (2) British Columbia has to meet the competition of other fruit-growing districts in Canada and the United States.

The Agrarian Movement

By M. H. STAPLES

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FOR more than a century there have been well-marked agrarian movements breaking out from time to time amongst the farmers of Canada. While Ontario was still covered with almost unbroken brush, and while log cabins were still the only shelter known to the pioneer, the men who were growing small patches of wheat among the blackened stumps of their little clearings began to organize. Feeling, no doubt, the isolation of the life inherent in a new and wild country they attempted to alleviate it by forming what they called Agricultural Societies. These were not merely fall fairs as they have come to mean nowadays, but were societies of broad interests embracing social activities, the study of public questions and of better farming methods, the encouraging of general education, and the promotion of contests in feats of strength and of prowess. All culminated in one grand rally at the annual fall fair.

RAPID GROWTH OF SOCIETIES

The fair is practically the only feature of the agricultural society remaining today. More than seventy years ago the original societies began to drop their social and educational activities and farmers' clubs arose to take up this work. These clubs, however, being entirely isolated from one another were very spasmodic in their operations and no solid progress in organization was made until about 1874 when the Dominion Grange was inaugurated at a meeting of farmers held in London, Ontario.

In the absence of adequate records it is difficult to determine the exact

explanation for the rapid growth of the new Association. Certainly the germ came from the United States. It is said that it had its origin there in causes arising out of the Civil War, and aimed at creating a better understanding among all classes and sections of the country. At any rate it grew tremendously there and when introduced into Ontario the branches multiplied so rapidly that within three years they numbered more than a thousand with a revenue at central office from membership fees of \$7,000. Many measures of peculiar benefit to agriculture were passed by both provincial and Dominion governments through representations made by this body, but within ten years it had lost much of its vitality and had dwindled in numbers and in power.

Then arose with spectacular suddenness a new organization, the Patrons of Industry. Whereas the Grange had been a fraternal society with a ritual, and had eschewed participation in party politics, the Patrons of Industry were almost purely political. The Association seems to have grown out of a demand for more aggressive leadership than was being given by the Grange, and although only founded at a meeting in Sarnia in 1890, by 1895 there were sixteen Patron members sitting in the Legislature and one member in the House of Commons. But that marked the height of Patron power. Startling in growth, and rapid in decline, in less than ten years after its beginning it was non-existent. While some useful legislation resulted from its activities its one permanent contribution was to break the hold of

partyism on the electorate. Never again could the farmers be herded so readily by a mere wave of the party flag.

WHEAT

Meanwhile great changes had been taking place in Canada. Not only had the forests of old Ontario been cleared away, but many descendants of the pioneers had moved on west and were setting streams of wheat flowing every autumn from the prairies toward the Atlantic Seaboard. For handling the vast amount of grain shipped, even as early as the eighties, extensive facilities were required for loading, storing, and transporting. It soon became clear that the railway could not begin to provide enough cars to take away the wheat rushed to the stations immediately after harvest, and in order to provide storage they offered inducements to parties to construct elevators at country points by agreeing that if the elevator measured up to a certain standard, a monopoly of grain shipping would be granted in return, that is, no cars would be placed at any such siding to allow the farmer or a buyer to load in competition. All grain must go through the elevator.

Now while this, no doubt, made for efficiency, it is readily seen that such a monopoly paved the way for abuses, and led to deep dissatisfaction on the part of the farmer. Grievances were aired in the House of Commons at Ottawa, resulting in the appointment of a Royal Commission of Inquiry in 1899. The Commission after thorough investigation reported that abuses undoubtedly existed from the effects of which the producer had no protection. As a result a measure known as the Manitoba Grain Act was passed in 1900 laying down several conditions for the regulation of the grain trade,

and notably it stipulated that the farmer should be given the privilege of loading directly on the car if he chose, and also that a buyer might load over a platform or flat warehouse even though there was an elevator at that point.

The farmers were elated over the measure, but not very much of the grain had been moved in the autumn following the passage of the Act when it became clear that the farmers' troubles were not over. Cars were ordered, but were seldom available, although the elevators seemed to be well served. The elevators, by united action, had cornered the supply of cars and the flat warehouse men and farmers were told to wait. But the farmers needed money, and need is a powerful goad.

FORMATION OF TERRITORIAL GRAIN GROWERS' ASSOCIATIONS

Among these western farmers were many who remembered the days of the Grangers and the Patrons away back in Ontario. In the history of those associations there was much to discourage further attempts at organization. Even in the West at an earlier date there had been "Farmers' Unions" and "Patrons of Industry," organizations that had ended disastrously. But in all of these there had been good features and the power of united effort had been demonstrated. There were men in the West who believed that in the light of past experience a new organization could be formed by embodying all that was best in the old and avoiding the bypaths which formerly had led to destruction.

Strong in this belief a handful of men met at Indian Head in December, 1901, following a good deal of correspondence, and formed what they called the Territorial Grain Growers'

Association. News of this meeting spread rapidly over the prairies preparing the way for advocates of organization who went here and there wherever opportunity offered. Within two months thirty-eight locals had been organized and by the next autumn locals were to be found from one end of the prairie to the other.

FIRST DEMONSTRATION OF USEFULNESS

Now came the time for a test of usefulness. It soon became clear that the railway had no intention of changing its practice and after a formal protest had been lodged the Association entered a charge in the courts against the railway for violation of the Manitoba Grain Act. Very few had confidence in the young Association being able to make headway against the powerful interests represented by the railway, but the farmers were successful in winning their case and in securing an order directing the railway to distribute cars as the Act required.

Here was the first demonstration that organization was worth while. The work begun in the midprairies was continued in Manitoba, and at Virden in January, 1903, the Virden Grain Growers' Association was inaugurated. Soon after that the farmers decided to go into business for themselves and in 1906 the Grain Growers Grain Company was incorporated. Following this, away next the foothills of the Rockies in 1909 the United Farmers of Alberta grew out of the various organizations then functioning in that province. There were now three powerful associations on the prairies as well as a farmer-owned grain company, all linked together in the Interprovincial Council of Grain Growers' and Farmers' Associations formed in 1907. About this time the western farmers turned their eyes toward the East

and sent three of their number to attend the annual meeting of the Grange in Toronto in 1910, to advocate coöperation between eastern and western farmers. So deep an impression did they create by their visit that shortly afterwards the Interprovincial Council was renamed the Canadian Council of Agriculture and in addition to former members included the Grange.

ENTRANCE OF POLITICS

Now begins a slightly different story. Up to this time political questions had been left severely alone by the new associations. But for many years the western farmers in particular had been smarting under what they considered an injustice imposed upon them by the Canadian Tariff. Wheat, the product from which they derived most of their revenue, they had to sell in the open market in competition with the wheat producers of the world. Farm machinery, building supplies, and household requirements they purchased for the most part in a market carefully shielded by a highly protective tariff. They stood, therefore, for tariff reduction; in fact, many advocated free trade. Nor were there wanting plenty of farmers in the East who held identical views. Consequently one of the first acts of the new general council was to organize a deputation of farmers to wait upon the government at Ottawa, praying for tariff revision, advocating reciprocity with the United States in natural products and many manufactured articles, and recommending the application of public ownership to railways, grain elevators, and telegraph and telephone service.

The delegates from Western Canada, five hundred strong, left Winnipeg by special train on the evening of December 12, 1910. They held meetings all the way to Ottawa, spokesmen going

from car to car to discuss the matters to be brought before the Government. At Ottawa they were joined by three hundred eastern farmers, mostly from Ontario, but drawn also from Quebec and the Maritimes. In the legislative chamber they were received by Sir Wilfred Laurier, the Prime Minister, who listened sympathetically to their presentation and who made reply that while personally he was no friend of public ownership he looked with favor upon every attempt to secure better trade relationships with other countries, particularly with Great Britain and the United States.

Following this demonstration, representatives of Canada were dispatched to Washington to open up negotiations for a new trade agreement on the principles advocated by the delegation. After lengthy conference they returned with something even better than they had dared to hope for, reciprocity in natural products with mutual reductions on a number of manufactured articles. At first everyone was delighted, as it was a measure which had been earnestly sought after by Canadian statesmen of all parties for years. But somehow, the manufacturers decided to oppose the agreement, and in the general election which followed in the summer of 1911 the party in opposition was triumphantly returned and the farmers' hopes were dashed to the ground. Thus while the organized farmers had been strong enough to force an issue upon the country they had proved unequal to the task of keeping the issue clear before the electorate in the face of all manner of charges, and appeals to race, creed, and party prejudice raised by the opposition.

NEW ORGANIZATIONS

While the Western Associations went steadily on, educating their members

and building up commercial companies, the Ontario Grange showed every sign of exhaustion. After the defeat of reciprocity no general meeting was held for nearly two years. At last four farmers met in Toronto in the autumn of 1913 to see if something could not be done to revive interest in agricultural organization, and as an outcome of their discussion a meeting attended by some two hundred delegates from farmers' clubs and subordinate Granges was assembled in Toronto in the following March, where the United Farmers of Ontario, and the United Farmers' Coöperative Company, Ltd., were launched. Of the commercial company nothing need be said except that within six years it had a paid-up capital of \$1,000,000 and an annual turnover of \$20,000,000. The Association grew slowly at first, but owing to increased vexations arising out of war conditions the restlessness of the farmer found an outlet in organization, and at the annual convention four years after inauguration the secretary could report nearly a thousand clubs in affiliation with a membership of thirty thousand.

ARMY EXEMPTION BRINGS MATTERS TO HEAD

Just about this time a series of events occurred which upset all calculations. In the late autumn of 1917 a Dominion Election had been fought on the issue of conscription. The farmers had been urged to produce to the limit, and the Government had promised to exempt from the army young men actively engaged in farming. Not many weeks after the election this exemption was cancelled. A cry of protest went up all over the country, and in May a delegation of four thousand farmers from Ontario and nearly as many from Quebec swarmed in the streets of Ottawa seek-

ing an interview with the Government to advise them that a mistake was being made. To their representations scant attention was given; to a demand for a hearing at the bar of the House a flat refusal was returned. Having lodged a protest with the Governor General the farmers returned to their homes, angered not so much because their request for reconsideration was unheeded, but because, as they considered, the doors of Parliament had been shut in their faces by their own representatives. This feeling was not improved by the scorn, sarcasm and abuse heaped upon the farmers by the press. Smouldering resentment broke into open rage which found expression in a huge public meeting held in Toronto three weeks later.

After two days' deliberation the delegates went home determined to establish a farmers' own newspaper, to organize on every concession road, and to take direct, independent political action. Before many months were up two members at by-elections had been returned to the Provincial House and two to the Dominion House, and at the provincial general elections held a year later the farmers emerged from the contest with forty-five representatives, much the largest group. In the meantime Hon. T. A. Crerar had withdrawn from the Dominion Government on the tariff issue and had assumed the leadership of a farmer group of seventeen members at the Ottawa House. Thus the farmers were in politics in earnest.

Since labor and the farmers had worked together pretty closely during the election and had much in common, an agreement was reached between the representatives of these two groups to form a government for Ontario. At this prospect the urban folk of the province appeared to be appalled, but the new Prime Minister and his Cab-

inet made such a favorable impression wherever they went that dismay soon gave way to confidence. The new Government buckled down to work, but as it enjoyed a bare majority of two, the Prime Minister became anxious to increase his support and before many months began to advocate the extension of the new party so as to include electors of all walks of life. This seemed to many most opportune as the party press had unanimously assailed the farmers as class-selfish and seeking class-domination. But actually the Premier's invitation had the effect of bringing him into conflict with the United Farmers' Association which was responsible for electing him. The energetic secretary of the Association attacked his move as a step likely to destroy the whole Association. He argued that to "broaden out" would mean the creation of a new party organization which in turn would require a party fund and soon place the party in control of the moneyed interests. As a safeguard he advocated emphatically the need for retaining the class basis of organization, at the same time inviting other classes to organize on the same basis and coöperate to form a group government in which there would be no official opposition but where all groups would have cabinet representation in proportion to their elected strength.

While this controversy was raging, each side egged on by the party press, a Dominion general election was held from which sixty-five farmer candidates emerged victorious. Of this number many are known to be favorable to the idea of "broadening out" and forming a party along the old lines. The stumbling block is that they wish to retain the association machinery for election purposes and to this, of course, the Association would not submit. At the time of writing a Pro-

vincial General Election is looming up on the horizon, but the matter of organization remains still unsettled. In the face of a common foe it seems likely that differences which have existed far more in the press than in leaders' minds will to a large extent disappear.

CONCRETE RESULTS

During all these years of activity some concrete results have been attained, as respects the individual farmer, that deserve attention. In these we see the justification of the effort expended. The farmer has discovered his latent power, and as a class farmers have become an organized force to be reckoned with. The exercise of that power has given to the farmer a self-respect not generally known before and has won regard for him from other classes. He has formed

a habit of enquiry, of study, and of public discussion that has immensely elevated his standard of intelligence. Through this study and through the conduct of his commercial company he has acquired a wide knowledge of business in all its departments. The clubs have revived a form of social life for many years almost extinct in rural districts, and the power of partisan, political organization has been completely broken.

Thus matters stand today. In spite of all that may be said to the contrary there is evidence that the United Farmers' Organizations, though perhaps slightly weaker in point of membership than a year or two ago, are more powerful in the best sense than at any former time. That they will change in form there can be no doubt; that they will disappear seems altogether improbable.

Protection of Workers in Industry

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PROTECTIVE labour legislation is a necessity of our industrial system. While a great deal has been done through the individual efforts of employers to improve the physical conditions of employment, and while organised labour has made advances in this direction, it is inevitable that governmental regulations should provide certain protection for the general body of workers. If labour is by far the most important of all national resources it may be readily conceived that the conservation of such an asset is properly the duty of governments. In Canada the protection of workers by law involves legislation competent to the provincial legislatures, except in so far as Dominion works and undertakings are concerned. A consideration, therefore, of some of the major labour laws of the provinces will indicate to what extent they have provided protection for workers sufficient to ensure industrial efficiency and social welfare.

In Canada there has been a demand not only for improved labour laws but for uniform protection for all workers in the Dominion by the unification of existing laws. The National Industrial Conference which was held in Ottawa, September, 1919, considered the question of unifying and coördinating provincial legislation relating to the welfare of those engaged in industrial work. A Dominion-Provincial Commission was appointed to study the matter carefully and make recommendations to the Federal Minister of Labour. The four subjects which received the first attention of the commission were the inspection and

regulation of factories, shops and office buildings, regulation of mines, workmen's compensation and minimum wage regulations. After a great deal of deliberation recommendations were made for the unification of these laws in accordance with certain standards, and a resolution adopted that minimum wage laws for women and girls should be passed by all the provinces. The tendency of labour legislation enacted since has been towards stabilisation and uniformity but in many points the laws do not conform to the standard set by the report of the commission.

FACTORY ACTS

Protection of employees in factories is one of the earliest forms of labour legislation. The first Factory Act in the Dominion was passed by the Ontario Legislature in 1884. With the exception of Prince Edward Island, which is not primarily a manufacturing centre, the other provinces as they expanded industrially realised the fact that "special provision should be made for the safety, health and well-being of operatives employed in and about factories and like places" and passed acts providing for the inspection and regulation of factories. Many improvements to the original acts have been embodied in various amendments, and factory inspectors have been appointed for the purpose of safeguarding the interest of the workers by enforcing the provisions of these acts. Certain sanitary regulations protect the health of workers and detailed rules as to the guarding of dangerous machinery, elevators, hoists, installation of equip-

ment to reduce fire hazards assure their general safety.

The employment of women and young persons where their health is likely to be injured is prohibited by all the provinces but Quebec, which, however, forbids by an Order-in-Council the employment of boys under sixteen and girls under eighteen years of age in industries in which lead, mercury, phosphorus and arsenic are manufactured or used. Two provinces, Alberta and Ontario, forbid the taking of food into a room where any poisonous substance is exposed and provide that drinking water in any such room shall be taken directly from taps or closed receptacles. In all provinces women and young persons must be allowed at least one hour for a mid-day meal, but such hour is not to be counted as a part of the working time. Provision must be made also for proper ventilation, rooms must be kept clean and overcrowding is forbidden.

The hours of work for women and girls allowed by the various Factory Acts vary from ten hours per day and sixty hours per week in three provinces to eight hours per day and forty-eight hours per week in two provinces, and in seven permits may be issued for overtime on thirty-six days or six weeks in one year. In no case are women and girls allowed to be employed in a factory or workshop before six A.M. nor later than eleven P.M. The most favourable evening hour after which they may not work is set by one province at eight o'clock.

CHILD MINIMUM AGE

All the Factory Acts but that of New Brunswick state a minimum age of admission of children to employment which is not less than fourteen, although British Columbia and Nova Scotia make certain exceptions whereby

children under fourteen may be employed for limited periods in certain seasonal work connected with fish and fruit canning. The School Attendance Acts of most of the provinces place a general restriction on the employment of children of school age during school hours—for example, in Ontario the minimum age of employment is fourteen according to the Factory Act, but the Adolescent School Attendance Act requires children between fourteen and sixteen years of age to obtain work certificates before seeking employment.

MINING ACTS

In like manner the Mining Acts provide for the inspection and regulations of mines, making certain requirements regarding the internal arrangement of mines for the protection of miners against the peculiar dangers to which they are subject. New Brunswick and Prince Edward Island are the only provinces without such legislation. The employment of women and girls in the work of the mines is prohibited in Ontario, Alberta, Saskatchewan, Quebec, and the coal mines of British Columbia. All the Mining Acts but that of Manitoba fix a minimum age of employment of boys in mines. This age is highest in Ontario, where the minimum is placed at sixteen years for boys working above ground and eighteen for boys working below ground. In Nova Scotia no boy under twelve may do any work about the mines and in the metalliferous mines of British Columbia no boy under twelve may be employed below ground. In the former province, however, the Education Act prohibits the employment of children under sixteen unless they hold school certificates.

According to the Acts of the other provinces the minimum age varies from fourteen to sixteen. The Mines Act of Manitoba makes no provision

on this subject, but the Children's Act prohibits the employment of children under sixteen years of age in dangerous or unwholesome occupations. All the provinces have made rules in regard to age and certain qualifications for persons in charge of hoisting machinery. The eight-hour day is required by the Act of British Columbia for all mine workers; in Ontario and Alberta for all underground workers; in Quebec for boys under seventeen working underground and the law of Nova Scotia allows a ten-hour day for boys under sixteen.

The Acts of British Columbia and Nova Scotia require the inspector to visit each mine and every part of it at least once a month, but the acts of the other provinces do not contain any clause as to frequency of inspection. The Act of Quebec is the only one which makes no definite provision for adequate ventilation in mines. A certain measure of protection for the health of employees in mining camps is provided in all provinces by the Public Health Act.

WORKMEN'S COMPENSATION ACTS

All the provinces of Canada but Prince Edward Island have Workmen's Compensation laws now in force. In Alberta, British Columbia, Manitoba, Ontario, Nova Scotia and New Brunswick the collective liability system with exclusive state funds has superseded the older form of legislation of the Employers' Liability Acts, but in Saskatchewan and Quebec the employers are held responsible and in case of accident damages are recovered from them through action in the courts.

In each of the former six provinces a Workmen's Compensation Board of three members has been established to administer the funds to which all employers coming under the Act contribute. The provisions of the acts

vary considerably as to the industries covered, classes of workers included and the amount of compensation allowed. All the acts enumerate the industries to which the law applies and in no case are agriculture and domestic service included. These industries are divided into classes according to the hazard of the employment and the employers in the various classes are made collectively, not individually, liable for payment of benefits by an assessment the rates of which are uniform within each group but vary with the class.

This system of merit rating acts as an incentive to accident prevention, since those employers in whose establishment relatively few accidents occur pay a smaller premium. Certain employers, such as railway and navigation companies, are upon the individual liability basis. The six provinces having a system of state insurance provide compensation for injury due to certain industrial diseases, and the provision of medical service in connection with industrial accidents and diseases has been added to other compensation.

No uniform scale of compensation in the case of death or injury has been adopted yet by the provinces. In the six having a system of state insurance definite amounts varying from thirty to forty dollars per month are payable to the widows with a certain allowance for each child of from seven dollars and fifty cents to ten dollars within certain limits. In Ontario, Nova Scotia and Manitoba the Acts provide for the increase of the allowance for each child to fifteen dollars, in Alberta to twelve dollars and fifty cents and in British Columbia to twelve dollars per month in the event of the widow's death.

For permanent total disability Ontario and Manitoba allow compensation of sixty-six and two-thirds per

cent of average earnings of the workmen, the other four provinces allowing fifty-five per cent, but there are certain restrictions on the amount of wages that may be taken into consideration in calculating average earnings. By the Act of Quebec the sum of four years' wages of the deceased workman is allowed the widow with a maximum of three thousand dollars and a minimum of fifteen hundred dollars, and in Saskatchewan a sum equal to three years' wages with a maximum of twenty-five hundred and a minimum of two thousand dollars. Similar compensations are paid to employees in the two provinces for permanent total disability.

The amounts of compensation for partial disability vary greatly but the majority of the provinces pay a stated percentage of the diminution of earning capacity within certain limits. The Acts of Alberta and Ontario provide that a suitable foster mother taking the place of a parent may receive the same amount of compensation as a widow would receive.

In the six provinces the Workmen's Compensation Board may order first-aid appliances to be installed. British Columbia and Alberta authorise the Board to issue regulations for the purpose of preventing accidents and diseases. By the Acts of Ontario, Nova Scotia and New Brunswick this authority is delegated to employers' associations and regulations thus issued are binding on employers of the same class.

In 1921 an arrangement was made between the provincial governments of Quebec and Ontario whereby workers residing in Quebec and employed in Ontario will no longer be discriminated against in the application of the Workmen's Compensation Act. In the event of accident they will be entitled to compensation from the province in which they are employed.

MINIMUM WAGE

The demand for protection of women and girls in industry with respect to wages has resulted in Minimum Wage legislation in seven provinces of the Dominion; namely, Alberta, British Columbia, Manitoba, Ontario, Saskatchewan, Quebec and Nova Scotia. The Acts of Quebec and Nova Scotia are as yet inoperative. In all these provinces the Acts are administered by Minimum Wage Boards, excepting in Quebec where a commission of three is to be empowered with its administration. In forming these boards it has been the intention of each province to provide a responsible body of men and women representative of the interests involved, and authority has been given them to investigate occupations and industries at their discretion. The minimum scales for female workers are fixed with reference to the necessary cost of living rather than the ability of the industry to pay, and the jurisdiction of the boards extends to hours and conditions of labour in industries concerned, excepting in Quebec, where the law refers to wages only. Special provision is made for handicapped workers and all provinces have provided a penalty as a means of securing the enforcement of awards.

The application of the law is more or less restricted in all the provinces, and the special Miners' Minimum Wage Act of British Columbia is the only Act extending this protection to men. According to the annual reports of these boards the result of Minimum Wage legislation has been a general improvement in the standard of wages, hours and working conditions and not a tendency for the minimum to become the maximum.

MOTHERS' ALLOWANCES ACTS

The Provincial Mothers' Allowances Acts, while they do not provide direct

protection for industrial workers, have an evident bearing on the subject and are of special interest to labour. These Acts have been formed in the interests of the children for whom proper care in the home has been made possible. The allowance is considered in each case as a salary from the Government to an otherwise needy mother for services rendered to the state in the proper care of her children. As an employee of the state she is expected to measure up to certain standards set for such guardians. These Acts are in operation in the four western provinces and in Ontario, and have been subjected to continuous review in order that they might meet as far as possible the need of the present day.

By the Ontario Act as amended the allowance may be paid towards the support of dependent children of a mother who is a widow; whose husband is in an asylum; whose husband is permanently disabled; whose husband has deserted his family, and has not been heard of for five years, presumed to be dead. A proper foster mother may also receive an allowance and the board may use its discretion in the case of others not strictly under the Act.

Recipients are required to be British subjects, resident three years in the Dominion, and two years in the province, and proper guardians for the children. The age of a dependent child is under sixteen in accordance with the Adolescent School Attendance Act, and only mothers with two or more children or one child and another dependent and incapacitated member of the family are entitled to assistance. A commission of five people, two of whom are women, has been appointed for the purpose of this Act. The provincial government pays the whole cost of this commission and all other administrative expenses, so that the

fifty per cent of the cost of allowances, which is contributed by the municipalities, is paid to beneficiaries. By an amendment of 1921 the commission is authorised to enter into reciprocal arrangements with other provinces regarding the payment of allowances.

The provisions of qualifications of the acts in the other provinces are broadly the same except that in British Columbia, Manitoba and Saskatchewan mothers whose husbands are in penal institutions are included and in British Columbia deserted wives are qualified. Like Ontario these provinces state the age of dependent children as under sixteen, except in Alberta where fifteen is the age in the case of boys only. Three years is the longest time of residence required by any province. In British Columbia The Workmen's Compensation Board regulates the administration of the Act, in Manitoba a commission of five, in Alberta the Superintendent of Neglected and Dependent Children appointed under the Children's Protection Act of Alberta, and in Saskatchewan the Bureau of Child Protection.

In Nova Scotia a commission was appointed in 1919 to enquire *inter alia* into the practicability of a scheme for Mothers' Allowances. This commission has since unanimously recommended the passing of a Mothers' Allowances Act, the proposed terms of which are similar to the chief terms of the acts of the other provinces.

WOMEN AND CHILDREN—EMPLOYMENT

As the amount of protection afforded by means of collective bargaining to women and young persons, who need it most, is almost negligible, it is natural that the tendency of protective labour legislation in Canada, as in other countries, should be to apply in a greater measure to them. In the case of children the state acts in *loco*

parentis and in the case of women workers it takes cognizance of the fact that they are physically weaker than men and that injury to the health of numbers of them would be a matter of public importance. The fact of special protection has been illustrated in the provisions of the Factory, Mining and Minimum Wage Acts and may be noted in other provincial laws.

The legislature of British Columbia, having regard to the draft conventions of the First International Labour Conference, enacted a series of measures in 1921, with the provision that they should come into operation concurrently with or after the coming into operation in other provinces of similar laws. These laws prohibit the employment of women and young persons between eight P.M. and seven A.M., set the minimum age of admission of children to employment at fourteen years and provide for an eight-hour day and a forty-eight-hour week in industrial undertakings.

SPECIAL PROTECTION AFFORDED WOMEN AND GIRLS

The Maternity Protection Act of British Columbia was passed forbidding the employment of women in any industrial or commercial undertaking during the six weeks following her confinement and permits her on production of the necessary medical certificate to leave her work six weeks previous to the probable date of confinement. Employers are forbidden to dismiss employees so absenting themselves from work. This Act became operative January, 1922, and provides for the carrying out of the draft convention in all respects except in so far as maternity benefits are concerned.

The Female Employment Act of Saskatchewan prohibits the employment of a white woman or girl in any

capacity requiring her to reside or lodge in or to work in any restaurant or laundry without obtaining a special license for the purpose. In Ontario a subsection of the Factory Act states that no Chinese person may employ in any capacity or have under his direction or control any female white person in any factory, restaurant or laundry, but the proclamation naming the date on which this section shall come into force has not yet been issued. This is the case with the Act of Manitoba and in British Columbia a similar law is enforced. With the exception of Quebec all the provinces grant by legislation to married women the right to wages and earnings acquired through employment.

PROTECTION OF CHILDREN

By legislation similar to the Children's Protection Act in Ontario, which prohibits girls under sixteen and boys under twelve from engaging in any street trade, Alberta, Manitoba, Saskatchewan and Quebec exercise a certain control over children in such occupations. By an amendment of 1922 to the Ontario Act, street trades for children are forbidden between the hours of ten P.M. and six A.M. Six of the provinces allow parents or guardians to bind a youth with his consent as an apprentice according to certain terms, and three provinces provide for the rights of minors over a stated age to contract for service. By the laws of all the provinces but Nova Scotia a minor may sue for wages within certain limits as if he were of full age.

In addition to this negative protection, that is to the prohibition of long hours, night work, employment of children under a stated age and in dangerous occupations, a certain positive protection has been provided by the Provincial School Attendance Acts,

which makes school attendance compulsory until a stated age. The statement has been made that "The best child-labour law is a compulsory education law covering forty weeks in the year and requiring the consecutive attendance of all children to the age of fourteen years."

The Acts of Ontario require full attendance from the ages of eight to sixteen, but make certain exceptions for children from fourteen to sixteen who may be allowed home permits or work certificates when necessary. For children holding such permits a part-time course of instruction of four hundred hours per year is necessary. This clause has not been fully carried out because of lack of accommodation, and the clause requiring part-time courses of instruction of three hundred and twenty hours per year for adolescents between sixteen and eighteen, does not become effective until September, 1923.

In Manitoba the age is placed at fourteen and in the other three western provinces at fifteen unless a stated grade has been reached. The Maritime Provinces require school attendance till thirteen years of age with certain exceptions, and in Nova Scotia the employment of children under sixteen is prohibited unless they hold school certificates.

PROVISION FOR TECHNICAL EDUCATION

The Technical Education Act, passed by the Federal Government in 1919, authorises the payment of money grants to the provincial governments on certain conditions for the purpose of promoting technical education in Canada. The sum allotted to each is in no case to exceed the amount thus expended by such province. Under this Act provision has been made in all the provinces for technical education. When fully developed a proper and

adequate system of technical and vocational education will contribute materially toward the solution of many problems in industry.

HOURS OF LABOUR AND WAGES

With respect to protection of workers in the matter of hours of labour in industrial undertakings it has been observed that the Factory and Minimum Wage Acts restrict the number of hours during which women and young persons may be employed. The administrative orders of the Minimum Wage Board of some of the provinces have limited to eight hours the working day of female employees in various establishments which have come under their jurisdiction. In Nova Scotia an eight-hour day has been established for young persons under sixteen in factories and for girls under sixteen and boys under fourteen in shops. In British Columbia the laws respecting an eight-hour day in factories apply to women and girls.

Restriction by law in the matter of hours of labour for men is confined usually to those occupations which are peculiarly hazardous or which involve the element of public safety, such as transportation. In British Columbia the working day for miners is limited to eight hours. This is the case in Ontario and Alberta for underground workers in mines and in Quebec for boys under seventeen working underground. In Manitoba the Fair Wage Board established by the Act of 1916 has provided an eight-hour day for certain occupations on public works. The British Columbia Hours of Work Act of 1921 provides for an eight-hour day in all industrial undertakings, but the Act is to come into force concurrently with or after the enactment of similar legislation in the other provinces. In addition to legislation on this matter the eight-hour

day has become the rule for large numbers of workers through collective agreements and trade practices. Statistics obtained in 1919 from firms employing approximately one half of the total number of persons employed in industry in Canada indicate that about forty-seven per cent work an average of eight hours per day or less.

EARLY CLOSING HOURS

Most of the provinces provide for early closing by-laws for shops and the closing of shops on certain days. In Ontario the Fire Departments Hours of Labour Act requires one whole day off duty for firemen regularly employed and where the two platoon system is in operation the twenty-four-hour release at the change of platoons shall not be regarded as a day off duty. By the Two Platoon Act of 1921 towns and cities of ten thousand population and over are required to operate the two platoon system. Following this plan firemen work alternate twenty-four hours or a ten-hour day and a fourteen-hour night shift to alternate once a week. No deduction of pay or holiday shall be allowed by reason of the provisions of this Act.

WAGE REGULATIONS

Minimum wages are being set for female workers in industry in the five provinces having active systems of minimum wage regulations. All the provinces provide general protection for workers in the matter of wages under the various Lien Acts and have Acts in force similar to the Wages Act of Ontario. In the case of assignment or liquidation this Act declares that wages not to exceed the wages of two months due any person employed at the time or one month previous thereto, shall be paid in priority to claims of general creditors. In Alberta, Saskatchewan, Manitoba

and Quebec directors of companies are liable to employees of the company for debts due for services performed while they were directors, providing that the company is sued within a year after the debt is due and the directors sued within a year after they ceased to be directors. Certain limits as to the amount which may be thus collected have been set by these provinces.

The Master and Servants Acts of Ontario, Manitoba, British Columbia and Saskatchewan provide for prosecution on charge of non-payment of wages. The majority of the provinces give some measure of protection in the matter of wages on public and subsidised works. Under the Fair Wage Act of Manitoba, 1916, a board composed of both employers and employees has been appointed to advise the Minister of Public Works in the matter of minimum wages and maximum hours of labour on public works.

SAFETY

In the matter of the safety of workers, the Factory and Mining Acts aim to prevent hazard in industry by requiring that dangerous machinery be guarded, precautions against fire be taken and that elevators and hoists be properly installed. The majority of the provinces safeguard employees and the general public by providing for the licensing of engineers operating steam plants and by regulating the construction and inspection of steam boilers. Interprovincial regulations respecting the construction of steam boilers have been adopted by the western provinces and Ontario.

In order to give a certain amount of protection to electrical workers, Ontario has authorised the Hydro Electric Commission to guard in every way possible the safety of the employees connected with its works. The laws of Manitoba and Quebec provide for

the licensing of electricians, Saskatchewan authorises the Lieutenant Governor in Council, and Alberta the Workmen's Compensation Board to make such regulations as are deemed necessary and practicable for the protection of electrical workers. By the law of British Columbia an inspector is charged with this duty. All the provinces but Prince Edward Island require moving picture machine operators to be licensed.

In British Columbia and Manitoba operators of passenger elevators must be licensed. British Columbia states eighteen as minimum age of operator, and Manitoba sixteen. Under the Factory Acts of the other provinces, excepting Prince Edward Island, certain regulations as to construction and operation are made and in Ontario the minimum age of eighteen is stated for operators on elevators in factories, shops and office buildings. By the Municipal Act of Ontario the municipalities are given the authority to license elevator operators.

All the provinces require chauffeurs to be licensed. Holders of such licenses must be eighteen years of age in all the provinces except British Columbia, which states seventeen, and fifteen to seventeen with permit. Ontario and Saskatchewan also issue licenses to drivers of sixteen to eighteen who have passed certain examinations.

For the protection of employees on buildings, Ontario, Alberta, Manitoba and Saskatchewan have passed Building Trades Protection Acts, making certain regulations to be complied with in the erection, alteration, repair or demolition of every building. Quebec has a similar act applying to cities and towns as well as an act requiring the inspection of scaffolding. In addition to the precautions against fire required by the Factory Acts, Ontario,

British Columbia and New Brunswick make further provision necessary by fire prevention acts.

EMPLOYMENT SERVICE OF CANADA

The Employment Offices Coördination Act passed by the Federal Government in 1918 provides for the establishment of a national employment service. The Employment Service Council of Canada has been created to advise the Minister of Labour on the administration of the Act, and to recommend ways and means of preventing unemployment. A public employment service has been developed in Ontario, Manitoba, Alberta, Saskatchewan, British Columbia, New Brunswick, Nova Scotia, and Quebec, with a total of seventy-six offices and eight clearing houses. Under the terms of the Act the Federal Department of Labour has assumed the responsibility for a certain proportion of the expenses of the service, but each province retains complete autonomy so far as the offices within its boundaries are concerned. Ontario, Alberta and Saskatchewan have established provincial Employment Service Councils which coöperate with the Employment Service Council of Canada, and in Manitoba the Industrial Conference Board functions as the Provincial Advisory Council to the Employment Service.

In five provinces employment offices charging fees have been abolished. Ontario and Quebec allow certain specified agencies to operate under license and government supervision but according to the agreement entered into by the Federal and Provincial Departments of Labour under the Coördination Act the provinces "shall not issue any new provincial licenses to commercial employment agencies which charge any fee or commission either to employers or employees and shall not transfer any license already issued."

In the establishment of the Employment Service of Canada, the Dominion has met the principal object of the draft convention concerning unemployment.

INCREASING CONCEPTION OF DUTY OF STATE TOWARDS ITS CITIZENS

From this summary of provincial labour legislation in Canada it is evident that complete uniformity has not yet been accomplished and that the laws do not meet in all respects the requirements of the draft conventions and recommendations of the First International Labour Conference. If, however, one might apprehend the trend of events, the volume and importance of protective legislation, both in new acts and amendments passed by the provinces in the last five years, would indicate an increasing conception on the part of the state of its duty toward its citizens.

In addition to legislation framed for the purpose of providing adequate protection for workers in industry some form of scientific management, some means of improving industrial relations and gaining coöperation between management and employees are essential in order to help solve the problem of industrial unrest with its ill effects on the workers themselves and on production. The organised effort represented by labour legislation is not sufficient. It must be supplemented by the efforts of employers, employees and their respective organizations.

GROUP INSURANCE

One form of industrial service developed recently in Canada is that of group life insurance. Employers who have adopted this scheme during the difficult years since 1919 regard it as an important factor in stabilising labour and improving the general attitude

of employees to their work which results in increased production. A system of group insurance may be adopted by an employer for purely business reasons, in order to reduce the cost of migratory labour, or he may consider it a means of meeting an economic responsibility he feels towards his employees. Whatever the impelling motive the benefits may be shared by both management and employees. It is not possible to measure exactly the influence of any one phase of employment management methods in improving industrial relations, but the fact that the volume of protection extended to workers through group life insurance has increased yearly since 1919 when it was first written in Canada would indicate that it performs a valuable service in this direction.

Section eighty-three of the Federal Insurance Act, 1917, states in part that

No such life insurance company shall make or permit any distinction or discrimination in favour of individuals between the insured of the same class and equal expectation of life in the amount or premiums charged or in the dividends payable on the policy.

This section precluded the writing of group insurance in Canada until companies agreed to make the group premium rate for the individual available also to the individual applying for insurance apart from the group. In 1919 the companies consented to meet this condition so that now every company writing group insurance is required to issue individual insurance on the same plan at the group rate.

Increase

Insurance firms in the United States have been writing group insurance since 1912, so that branches of such companies in Canada were naturally

the first to write it here. The gross amount effected in 1919 totalled nearly eleven and a half million dollars covering eighty-six policies, and five of these were written by a Canadian company. The greatest increase in business was in 1920 when the number of new policies was three hundred and one, amounting to about sixty-six and a half million dollars. By the end of 1921 group insurance to the value of over eighty-eight and a half million dollars had been effected in Canada and thirty-nine million of this covered policies written by Canadian companies. Returns for 1922 are not complete yet but indicate that this gross amount has been increased to over a hundred million dollars.

Purpose

The purpose of group life insurance is to provide employers means of insuring their employees on a basis of cost. Automatic coverage of all persons of the group concerned is effected under one blanket policy, and it is necessary that a group be composed of at least fifty persons. Group insurance is usually written under a formula determined by the conditions surrounding employment, the hazards involved and age distribution,—in other words the assurability of the group as a whole. In thus precluding individual selection medical examinations become unnecessary, the fact that an employee is in active service being taken as evidence of fairly good physical condition.

Amounts of Insurance

The minimum amount of insurance granted to each individual is five hundred dollars and the maximum usually three thousand dollars although some companies allow larger sums under certain conditions. There are several formulae which may be followed in determining the amount of insurance

for each employee. The plan may provide a uniform amount for all in the group or the amount may be based on wages or length of continued service. Under the latter scheme an employer is given an opportunity of rewarding faithful workers, especially if the formula is made retroactive. A typical policy of this kind might start with five hundred dollars or one thousand dollars after three months of service and increase one hundred dollars per year until a stated maximum had been reached. The period between the five hundred dollar and the one thousand dollar amounts is often shortened, and larger yearly increases by which the maximum is reached in a shorter time are popular with many concerns. An equitable and satisfactory plan for office staffs is to have the amount for the individual equal his yearly salary and this amount is adjusted as the salary increases. Some firms provide the same amount of coverage, usually one thousand dollars, for all employees, and the plan of one thousand dollars for single and two thousand dollars for married employees regardless of service and rank has been adopted in a few instances. Many variations of these schemes are permitted, but in all cases where varying amounts are awarded the discrimination must be between classes, not between individuals.

Provisions for Payments

A certificate of insurance bearing the name of the beneficiary and the amount of insurance is issued to each person in the group but the contract is between the employer and the insurance company. In the case of death from any cause of the employee covered the contract provides for the immediate payment either in one sum or in monthly instalments of the amount of the insurance to the beneficiary.

Provision is usually made for the payment to the insured should he become permanently and totally disabled before reaching the age of sixty.

One-Year Renewable Term

Group insurance is written upon the one-year renewable term plan. The cost is in accordance with a definite scale of rates and increases for the individual each year because of increasing age, but the general experience is that the rate for the whole group remains practically constant because of new and younger workers being added to the group. The rates are greatly reduced since the expense to the insurance firm of medical examination, of individual solicitations and collection of premiums has been eliminated. Nine or ten dollars per one thousand dollars of insurance is an average yearly premium or about one per cent of the payroll. In the great majority of cases this premium is paid in full by the employers. The contract provides for terminations and additions to the insurance on the pro rata rating basis and also for the conversion privilege whereby an employee leaving the service can within a stated time convert the insurance to a regular policy at the regular rate for his attained age and without any medical examination. The conversion privilege is valuable mainly because a medical examination is not necessary and because many a workman will convert his policy who would not invest in a new policy.

POPULARITY FOR GROUP LIFE

Group sickness and disability insurance is sold less extensively in Canada than group life. One reason for this may be that a part of the field has been covered already by the compensation payable for industrial accidents and diseases under the Work-

men's Compensation Acts. Moreover, such policies involve a larger premium outlay. When combined with group life insurance in order to give complete protection it is customary for the employees to contribute towards the premiums under the disability contract. This system has the advantage of placing a certain amount of responsibility upon the employees, thus tending to develop greater interest and coöperation.

HARMONIOUS RELATIONS

Individual life insurance is expensive for the average wage-earner, and his chances of accumulating sufficient savings to provide for his family's future are small. The guarantee that a certain definite provision will be made for his family in the event of his death, not as a matter of charity but as a benefit rightly belonging to his employment, such a guarantee will be a strong inducement for him to remain with his firm. The mental effect of this relief from anxiety for the future results in greater efficiency and makes for harmonious relations between employer and employed.

With the exception of the matter of wages, almost any method of improving conditions for workers, which is not required by law nor a definite necessity of the industry, is open to adverse criticism. In the case of group insurance the chief objection has been that such a system is paternalistic, that it is offered as a bribe to workers to hold them and as a substitute for proper wages. If, however, the amount of premium outlay were applied to the wages of workers, the increase thus gained would amount to about one per cent only. A spirit of coöperation can be developed through a system of group insurance which could far outrank any feeling of paternalism, and this indication that an employer

desires continued service from his workers arouses a feeling of confidence and permanency productive of satisfactory work.

Group life insurance is but one of several coöperative benefit plans and it cannot be advocated as a cure-all for industrial unrest. It is, however, another evidence that the human aspect of industry is receiving consideration. It is a form of protection em-

ployers may provide for their employees at cost and which the employees are not able to provide for themselves at a similar rate. If group insurance is made a supplement for low wages it will not gain the good-will of the workers, but as a fair recognition of the interdependence between employer and employee, it may do much to stimulate the coöperative spirit in industry.

The Returned Soldier

By THE HONORABLE H. S. BELAND, P.C., M.D., M.P.

Minister of Soldiers' Civil Reestablishment, Ottawa

THE last Canadian census prior to the outbreak of war, taken in 1911, showed a male population between 18 and 45 years of age, of 1,720,070, divided as follows: Between 18 and 30, 980,150; between 31 and 40, 543,163; between 41 and 45, 196,757.

The enlistments from Canada in the Canadian Expeditionary Force and in the Allied Armies, numbered 610,031, of whom 432,642 proceeded overseas. At enlistment probably 100,000 were, through the cessation of railway extension, out of regular employment, and 10,000 were minors under the age of 18 years, who had followed previously no regular occupation. The withdrawal from active industry of the balance of half a million men created during the war a very serious problem and resulted in the reorganization of almost every industry, the employment of female help and the consequent closing of opportunities for male employment. The gravity of the situation was increased and the problem made more difficult by the length of time many of the men were on active service. It will therefore be seen that the reabsorption and reestablishment of so large a proportion of the male population of Canada was no easy task. It is true that the Dominion possesses almost unrivalled natural resources but the returned soldier, after years of military service, could not be expected at once to readapt himself to peace conditions nor could he live on those natural resources.

EMPLOYMENT FOR THE RETURNED SOLDIER

Within one year of the commencement of hostilities, invalids were re-

turning from overseas and others, found unfit for military service, were being discharged from camp. The latter usually returned to their previous occupation while the former required a longer or shorter term of hospitalization. In the autumn of 1915 arrangements were made with each of the provincial governments which resulted in the formation of commissions charged with the duty in each province of seeking employment for men returning from overseas as soon as they were fit to work. The personnel of these commissions usually included a member of the provincial government, a manufacturer, a commercial man, a representative of labor and an agriculturist. During the three years, prior to the Armistice, thousands of men were reestablished through the agency of these commissions, very close coöperation existing during this period between them and the Federal Government. In June, 1916, a system of Vocational Training was established to which reference will be made later.

AFTER THE ARMISTICE

The greatest pressure commenced shortly after the Armistice. Immediately this event took place the Government, through the Department of Soldiers' Civil Reestablishment prepared a questionnaire which was dispatched overseas. The object was to collect complete information from all members of the Canadian Expeditionary Force as to their intention regarding employment on their return to Canada, so that adequate plans might be made for their rapid absorption as civilians into the national life

of the country. The forms were distributed from Ypres to the Vosges Mountains, from the Rhine to the English Channel and throughout England and Scotland. They were completed and dispatched to Ottawa, with such speed that by the 31st March, 1919, information with respect to every man, comprising his regimental number, rank, unit, whether married or single, age, place of residence in Canada, dispersal area selected for discharge, occupation prior to enlistment, occupation desired on demobilization, past experience in that occupation and various other items, was available and was circulated throughout twenty-two dispersal areas.

In addition to the securing of this information an active campaign in France and England was conducted for the purpose of informing the troops about to be demobilized, as to the various benefits provided by the Government in their behalf. Lectures were delivered, pamphlets distributed, advertising carried in newspapers and periodicals circulating among the troops and moving picture displays were given. A representative of the Department of Soldiers' Civil Reestablishment travelled from England on every transport and delivered lectures daily to the men during the voyage.

Free government employment offices were established in 89 towns and cities and an official, whose duty it was to deal with all demobilized soldiers seeking employment, was placed in every office. Through his instrumentality, preference for returned soldiers was secured and an active campaign was carried on by a special branch of the department among employers of labor generally. In the working out of this policy labor scouts were engaged to visit, at stated intervals, the principal industrial establishments so

as to keep in touch with vacancies as they occurred.

SUCCESS OF EMPLOYMENT BUREAU

An analysis of the demobilization questionnaires which were completed by 273,544 men, showed that about 20 per cent did not desire to return to their pre-war occupations. The following statement (*See p. 269*) indicates the main occupational divisions previously followed and subsequently chosen:

Of the 273,544 men referred to, 100,755, or 36 per cent, were over the age of 30, while 27,629 were over the age of 40. The success attending the operation of this employment service is indicated in the attached chart. It will be seen that the number of positions obtained greatly exceeded the net number of men making application. In many cases several positions had to be found before a man was finally placed; for instance, 22,336 men were placed twice, while 231 were found ten or more positions. In one case the department succeeded in placing a man 29 times before he was finally reestablished.

WAR SERVICE GRATUITY

Immediately after the Armistice the Government provided for the payment of a special War Service Gratuity to all men who had served, based on the length of service. The amount paid to a private who had three years' service, a part of which was overseas, was \$70 per month, if without dependents, and \$100 per month if with dependents, payments being continued for six months. For lesser periods of service payments were made for less than six months.

In addition to the large number of men who returned without physical impairment many were disabled by wounds, injury or disease. Others,

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STATEMENT OF OCCUPATIONS FOLLOWED PRIOR TO ENLISTMENT AND THOSE PROPOSED TO BE FOLLOWED SUBSEQUENT TO DISCHARGE, BASED ON 273,544 DEMOBILIZATION QUESTIONNAIRES

OCCUPATION	LOSS TO OTHER OCCUPATIONS	NO CHANGE IN OCCU- PATION	GAIN FROM OTHER OCCUPATIONS	NUMBER PREVIOUSLY FOLLOWING OCCUPATION	NUMBER PROPOSING TO FOLLOW OCCUPATION
Agriculture and stock raising	4,716	67,502	20,269	72,218	87,771
Building and construction . .	3,256	18,647	1,255	21,903	19,902
Civil and municipal govern- ment	1,045	2,981	1,024	3,976	3,955
Domestic and personal serv- ices, communication and transportation	7,508	21,532	3,981	29,040	25,513
Hunting and fishing, for- estry and lumber manu- facturing	1,969	4,410	488	6,379	4,898
Clothing manufacturing . . .	739	2,538	217	3,277	2,755
Food	1,564	3,312	378	4,876	3,690
Mechanics	10,234	19,439	3,232	29,673	22,671
Textile, chemical and gen- eral trades	2,534	6,793	606	9,327	7,399
Mining	1,860	5,486	549	7,346	6,035
Professional and general . .	12,708	55,986	20,409	68,694	76,395
Trade, merchandising and banking	5,757	11,078	1,483	16,835	12,560
Total	53,890	219,654	53,890	273,544	273,544

who though fit in a military sense at the time of enlistment were not pathologically fit, and these suffered an aggravation of pre-war disabilities due to the stress of military service, or there was a natural progression during service. Those who required medical treatment were provided for in hospitals specially organized or in existing institutions throughout Canada. When medical treatment had reached a finality further assistance was granted in three ways: (1) by vocational training, (2) by pension, and (3) by insurance.

VOCATIONAL TRAINING

After the close of every previous war disabled soldiers had been allowed to fend for themselves and no attempt was made, except on an insignificant scale, to salve the war wastage among

those suffering severe disabilities and handicaps. As early as 1915 certain patriotic Frenchmen commenced Vocational Training schools in France, supported largely by public and private philanthropy, and a good work was achieved, but nothing upon a comprehensive and national scale was undertaken until the Government of Canada led the way. Two plans presented themselves: (1) To train in highly skilled trades, taking from one to three years or possibly more, or, (2) to build upon the foundation of the pre-war occupation by teaching some lighter occupation closely allied to it.

The second method was adopted as a general principle in Canada. For instance, if a man had been a printer and had an amputation of the leg, he was if possible trained to operate a

linotype or monotype machine. If he had been a house carpenter and was so wounded that he could not climb over a building, he was taught cabinet-making. Those who received training ranged in age all the way from youths under 18 to men of 55 and over—there were 252 of the latter—in education from the illiterate to the university student; industrially, from the lowest grade railway laborer to the highly skilled mechanic. The number of occupations in which training was given was 421; 83.9 per cent of the trainees had received no further education than that given in the public school; 13.2 per cent had attended high school; 1.5 per cent a university and 1.4 per cent a business college; 55.1 per cent were single or widowers and 44.9 per cent were married.

INDUSTRIAL SURVEY

In order to determine the best method of training, a careful survey was made of industrial opportunities and many hundreds of manufacturing plants were investigated so as to select occupations suitable for men with specified disabilities, to ascertain the attitude of manufacturers and employers of labor to disabled soldiers, and to educate them toward a proper understanding and appreciation of the problem. It was thus possible for the men in charge of the work to find an opening suitable to the man applying for training. Up to the 18th November, 1922, 42,568 men had graduated, of whom 8,335 were minors who were granted courses of training not because of a disability but because they enlisted when under the military age of 18 and suffered a serious interruption of their training or education.

To ensure the ultimate value of the training given a follow-up system was introduced and continued until it was demonstrated that the trainee was in

a position to earn regular wages. The final disposition showed that 65.6 per cent of the men trained continued in the occupation for which they were trained, 25.9 per cent were employed otherwise and the balance were lost sight of or had died.

PENSIONS

When a man enlisted he was supposed to have a healthy person. On his discharge the state charged itself with the duty of compensating him for any detriment he might have undergone during his period of service. The intention of a pension is to ensure decent comfort to its recipients. The Canadian practice took no account of former training or social status in determining pensionability. Further, in order to encourage industry and adaptability, it was provided that no deduction should be made from the amount awarded to any pensioner owing to his having undertaken work or perfected himself in some form of industry. It was realized that if a pension granted were subject to reduction because the recipient had secured remunerative work, a premium would be put on shiftlessness and indifference. Owing to the increase in cost of living and the recognized inadequacy of pre-war pensions, various increases in the amount of pension for total disability, upon which all degrees of pension are based, have been made effective from time to time. Under pre-war regulations pension for total disability was \$264 per annum. This was increased by a Committee of Parliament which sat in 1916, to \$480. It was subsequently increased to \$600, which is still the basic rate. There is, however, a cost of living bonus added, of 50 per cent, making the total disability pension for ranks below captain, \$900 per annum. In case of helplessness, requiring constant attendance,

a further amount up to \$750 per annum may be added. A widow's pension is \$720 per annum. Additional pensions are paid in respect of children of widows and of total disability pensioners, \$180 per annum for the first child, \$144 for the second, and \$120 for the third and subsequent children. The pension standard is the earning power of a healthy male in the open labor market.

INSURANCE

Owing to the fact that a man who had suffered impairment during his war service was debarred from obtaining life insurance at ordinary rates or from obtaining insurance in a line company at all, an act known as the Returned Soldiers' Insurance Act was passed in 1920, providing for government insurance at low rates for any man who had served in the Canadian Forces, one feature being that no medical examination was required. In view of the number of death-bed insurances it has since been necessary to impose certain restrictions. The principal object of this insurance was to enable a man to make provision for his widow and dependents, as even though he might die from a service disability the widow is not pensionable unless marriage took place before the appearance of the injury or disease.

A further class of insurance was made applicable from September, 1921, under which the Government assumed responsibility for accidents in the case of workmen engaged in factories, etc., where such accident imposes liability on an employer. The benefits are restricted to those who are in receipt of a pension of 20 per cent and upwards. This legislation was considered necessary, as employers hesitated to engage men with a war disability owing to the cumulative effect when an accident occurred, as no deduction is made by

Workmen's Compensation Boards in respect of the previous condition; for example, a man who lost an eye in service and a second eye in industry would be entitled to compensation from an employer for total blindness. The present law places all pensioners within the classes named in a preferred position.

LAND SETTLEMENT

Another measure, which has made for the rehabilitation of a large number of men, is the Soldier Settlement Act, under which assistance is given to eligible and qualified returned soldiers who desire to settle on farms in Canada. Every man must have sufficient capital to pay down 10 per cent of the purchase price, also to maintain his family until the next harvest and to buy feed and seed. Loans up to \$4,500 for the purchase of land, \$2,000 for live stock, and \$1,000 for erection of buildings, etc., may be made to those purchasing land through the Soldier Settlement Board; to settlers on Dominion lands loans up to \$3,000 may be made, and those who own agricultural land, but require money for development, may borrow up to \$5,000. Provision is included in the Act for the amortization of loan and interest repayments and assistance is rendered to settlers in the purchase of equipment, etc.

RELIEF

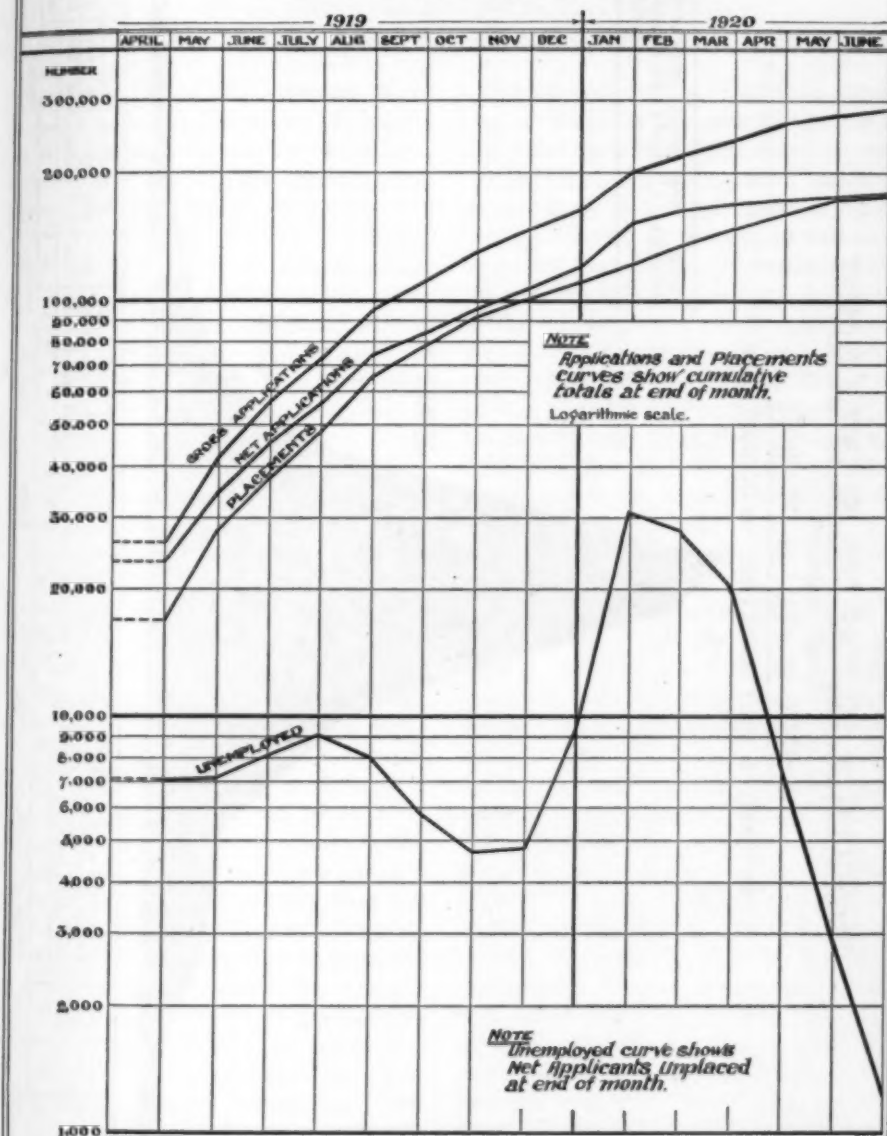
During the winter of 1919-20, it was apparent that a measure of unemployment relief would be required for the assistance of men who had failed to settle themselves after discharge. This work was carried out by coöperation with the Canadian Patriotic Fund and resulted in tiding over a number of men who were not able to secure employment or who having secured it were unable to hold it. To a lesser extent it has been necessary

to assist vocational graduates and pensioners who have become unemployed, down to the present time. The Department of Soldiers' Civil Reestablishment has also operated workshops where handicapped men can obtain light employment in the manufacture of articles which are readily saleable. It is probable that this work will be carried on permanently through the coöperation of a non-governmental organization.

From the foregoing summary it will

be apparent that very energetic measures have been taken to rehabilitate and reestablish the men who served in the Canadian Forces during the late war. While some aspects of the problem still remain, and will do so for many years to come, by far the larger majority have been reestablished and, as soon as normal conditions prevail in industry, trade and commerce, the balance, apart from the sick and mentally deficient, will have become absorbed.

DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT RECORD OF EMPLOYMENT SERVICE



The difference between Gross and Net Applications is caused by the withdrawal of names of certain men who registered, or their failure to report when called upon.

	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
GROSS APPLICATIONS	25,666	41,952	56,722	72,628	94,618	110,584	129,734	144,228	161,441	202,185	222,404	240,726	264,665	275,453	280,856
NET APPLICATIONS	20,809	34,739	43,236	57,317	74,142	84,616	96,978	106,496	119,180	151,259	160,654	164,659	167,990	172,260	176,020
PLACEMENTS	16,664	27,308	37,063	46,160	64,111	78,703	92,545	101,719	109,340	120,925	132,830	144,465	160,197	169,077	174,795
UNEMPLOYED	7,145	7,201	8,172	9,154	8,031	5,881	4,659	4,779	9,795	30,900	27,701	20,192	7,799	2,983	12,255

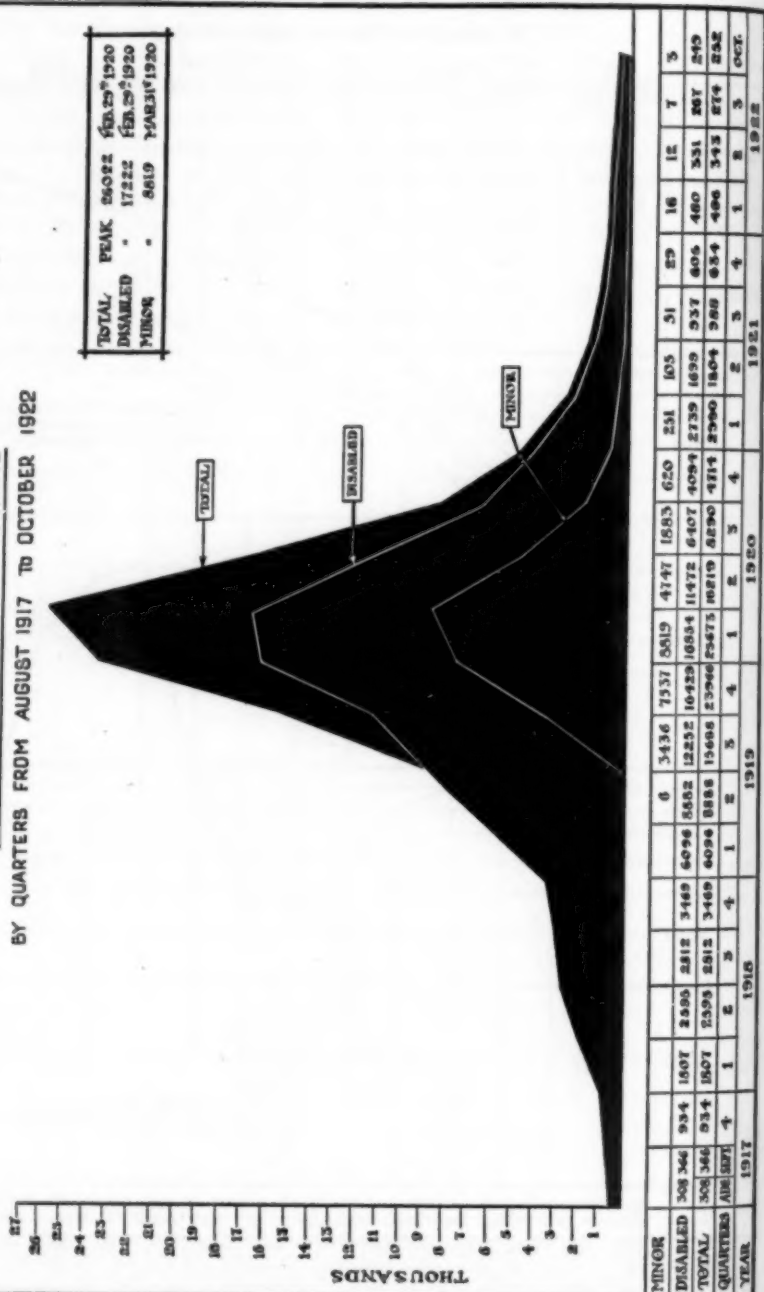
Certain men were registered and placed several times.
174,795 situations were found for 109,493 men

DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT

CHART SHOWING

NUMBER OF MEN IN TRAINING

BY QUARTERS FROM AUGUST 1917 TO OCTOBER 1922



Divorce in Canada

By THE HON. MR. JUSTICE A. RIVES HALL

Puisne Judge of the Court of King's Bench for the Province of Quebec, Montreal

A REVIEW of the question of divorce in the Dominion of Canada must necessarily be prefaced by a brief indication of English law and practice, for, although the British North America Act has empowered the Federal Parliament to make laws concerning marriage and divorce, that authority has never been invoked for any general law, and the only substantive law applied to such cases, either in the Provincial Divorce Courts, or before the Senate Committee, is the English law.

The Common Law of England, which follows in this case the Canon Law of the Church,

deemed so highly and with such mysterious reverence of the nuptial tie that the causes of divorce are purposely limited to a few extreme and specific provocations (*Blackstone's Commentaries*).

The consideration of such cases originally came within the exclusive jurisdiction of the Ecclesiastical Courts, which could first decree a divorce *a mensa et thoro*, a judicial separation, which did not, however, dissolve the marriage tie; or, secondly, pronounce a sentence of nullity, declaring that the show or form of marriage had between the parties was null and void from the beginning—that no legal tie ever existed. The Ecclesiastical Courts, however, had no authority to dissolve a marriage good in itself, whatever might be the delinquency of the parties. The sentences pronounced were improperly termed sentences of divorce *a vinculo matrimonii*, for in the cases to which alone such sentences were applicable, there was in fact, in the eye of the law, no legal *vinculum* or binding tie of any kind.

Strictly speaking, therefore, there was no absolute divorce; by the law of England the contract of marriage was indissoluble, and when once it had been constituted in a legal manner there were no means of putting an end to it in any of the courts. Nevertheless the actual dissolution of such a contract, when adultery had been committed, was so consonant to reason and religion, that where the general law failed to give a remedy, Parliament stepped in to provide one specially by passing a particular law in favour of those who could make out a case which would warrant its interference.

Two conditions were in general necessary to satisfy Parliament:

First a divorce *a mensa et thoro* had to be obtained from the Ecclesiastical Court. Second, an action for damages had to be brought against the adulterer in the Civil Court for criminal conversation. The latter was not absolutely necessary, and appears to have been regarded as a safeguard against divorce being granted to persons who had connived at the acts of adultery, or had themselves been guilty of misconduct in the marriage state. By this characteristic evasion, the law of England completely changed its practice while still maintaining its ancient theory of divorce. Probably the anomalous character of the remedy might have brought about a change but for the great practical evil of the expense attending the proceedings. Three suits—ecclesiastical, civil, and parliamentary—were necessary. Divorce became a remedy for the rich. The poor were driven to bigamy. Yet it was not until 1857—and then not without

determined resistance—that this disgraceful state of things was changed by the passing of the Act under which was established the Court of Divorce and Matrimonial Causes, the proceedings before which have now, with few exceptions, the same object and result as the former proceedings in Parliament and in the Civil and Ecclesiastical Courts. The action for damages for crim. con. is represented by the adulterer being made a party to the husband's suit. Full divorce is granted on the principles usually recognized by the House of Lords; and the other remedies are such as might formerly have been granted by the Ecclesiastical Court.

It is to be noted that, while the wife's adultery is a sufficient cause for divorce, the husband's transgression must be aggravated by other offences: incest, cruelty or desertion.

FIRST REFORM ACT

The Divorce and Matrimonial Causes Act was undoubtedly a great and necessary reform, for as between the desirability of divorce by Special Act of Parliament or by petition to a judge, the opinion of those who have had an opportunity of studying both methods is entirely in favour of the latter. The enunciation of certain definite grounds upon which a decree would be pronounced was a still further improvement. But that Act, it was soon noted, fell far short of an enlightened modern view of what a reasonable law of divorce should be. So long ago as 1896 it was declared that the English law of divorce and separation was in the highest degree unsatisfactory.

It is full of inconsistencies, anomalies and inequalities amounting almost to absurdities; and it does not produce desirable results in certain important respects.

EQUALITY OF SEXES

The question of still further reform was, therefore, submitted to a representative commission, which, after a prolonged and careful study, presented its report towards the end of the year 1912, the majority recommending extensive reform.

The outstanding feature of this report was the demand for an absolute equality of the sexes, the placing of men and women on an equal footing with regard to grounds for divorce, which were extended to include: adultery, wilful desertion, cruelty, incurable insanity, habitual drunkenness, and committed death sentence.

Under the jurisprudence that had been developed under the Act, "cruelty" was given a very narrow interpretation; it had to be such cruelty as resulted in bodily injury. The commission suggested that cruelty sufficient, even without adultery, to justify divorce

should be such conduct by one married person to the other as makes it unsafe, having regard to risk of life, limb or health, bodily or mental, for the latter to continue to live with the former.

This epoch-making report was the subject of wide discussion, and received a fairly general approval; and had the Great War not supervened within the short period of eighteen months it is not unlikely that the English law of divorce would long before this have been brought into accord with modern ideas. Nothing having been done, it is still condemned by the most competent authorities as immoral and unjust. Lord Buckmaster, in a recent communication to *The Times* (October 11, 1922) gave specific instances of the anomalies and abuses that still prevail. The wife of an insane murderer remains his wife. He is

incarcerated in a criminal asylum without prospect of release. She is told by the Courts that she is a married woman, and even in such circumstances must remain irrevocably married in the sight of the law; and the social world, with expressions of pity, shuts its eyes to the consequences. Infection by syphilis is no ground for divorce. Bigamy, which is extremely common, is not sufficient ground for divorce, it must be "bigamy with adultery"; and

although it might be assumed anywhere outside of a law court, that a man who has risked penal servitude to obtain possession of a woman, was not prompted by platonic love, yet the law requires independent proof of adultery.

Lord Buckmaster's letter made a profound impression, and there is evidently a remarkable modification of opinion among religious leaders, including even some dignitaries of the Anglican Church, which has heretofore set its face sternly against the remarriage of even the innocent parties in divorce proceedings.

This law of divorce with all its anomalies, inequalities and injustice, is the only substantive law that exists in Canada. It is applied in all the provinces except Ontario and Quebec. The only grounds for divorce are those provided by the English Act. It speaks well, therefore, for the morality of our fellow-citizens that the shortcomings of our law should not, as yet, have brought about the conditions that are so much deplored in England.

PART SENATE PLAYS

The jurisdiction of the provincial courts is, however, supplemented by the Parliamentary Divorce granted by the Senate at Ottawa, to which the residents of Ontario and Quebec have access as well, and as Parliament has

enacted no substantive law, has not enumerated any special grounds for divorce, the Senate has asserted the right of examining each case on its merits, and, while giving every consideration to the English jurisprudence, holds itself entitled to bring to bear on the question modern ideas and standards. Parliament is not, therefore, bound by the narrow limits of the English law, and does recognise other grounds of divorce than those established by the Divorce and Matrimonial Causes Act. There are, therefore, in Canada, two jurisdictions, two sets of tribunals, before which questions of divorce may be brought.

JURISDICTION OF PROVINCES

The British North America Act, 1867, conferred upon the Parliament of Canada the power to make laws for the peace, order and good government of Canada in relation to marriage and divorce, and the provincial tribunals in certain provinces are still permitted to continue a jurisdiction in matters of divorce which was conferred upon them prior to Confederation, or, in the case of provinces admitted later, acquired by the general terms of their charters.

In the first category are found the provinces of Nova Scotia, New Brunswick and Prince Edward Island, all of which had, by their provincial legislatures, established courts of marriage and divorce. British Columbia stands in a somewhat different position, in that, while no special court was established, jurisdiction has been assumed by the Supreme Court of the province under the Ordinance that enacted that the civil and criminal laws of England as the same existed on the 19th November, 1858, should be in force in all parts of the province.

This was affirmed in the case of *S. vs. S.* (1. B. C. L. R., p. 23), and

while there was in that case the weighty dissenting opinion of the Chief Justice (Sir Matthew Begbie) the Court has since repeatedly followed the precedent.

The Privy Council later gave the seal of its approval to this ruling and declared that the Supreme Court of British Columbia has jurisdiction to entertain a petition for divorce between persons domiciled in that colony in respect of matrimonial offences alleged to have been committed therein (*Watts vs. Watts*, A. C. 1908, p. 573).

Manitoba, Saskatchewan and Alberta, as part of the old Northwest Territory, enjoyed the laws of England as they stood on the 15th July, 1870, and, therefore, they had the English law of divorce, under the Divorce and Matrimonial Causes Act 1857.

It is interesting to note, however, that for many years this right was ignored, petitions for Parliamentary Divorce were frequently presented, and it was not until the year 1919 that the jurisdiction of the provincial courts was finally admitted. In that year two cases were pleaded before the Privy Council, one from Manitoba (*Walker vs. Walker*, A. C. 1919, p. 947); the other from Alberta (*Board vs. Board*, A. C. 1919, p. 956). In the Manitoba case, Lord Haldane said:

The Divorce Act of 1857 did much more than set up a new court and regulate its procedure. It introduced new substantive law, and gave to the court it constituted not only the jurisdiction over matrimonial questions, which the old Ecclesiastical Tribunal possessed, but a new jurisdiction arising out of the principle, then for the first time introduced into the law of England, of the right to divorce *a vinculo matrimonii* for certain matrimonial offences. This right had been made part of the law of England before July 15, 1870, and it became part of the substantive law of Manitoba.

QUEBEC AND ONTARIO

The provinces of Quebec and Ontario are, therefore, the only parts of Canada that have no divorce other than the Parliamentary Divorce granted by the Federal Parliament. At the time Upper Canada, now Ontario, adopted the English law relative to property and civil rights, in 1792, no power to dissolve marriage was vested in the courts in England, and the provincial legislature never conferred it, although the provincial courts are competent to deal with the validity of a marriage contract on the ground of its being a civil contract, and, in cases of fraud, mistake, duress and lunacy, declare it void.

In the province of Quebec marriage is declared indissoluble, and, while the provincial courts have jurisdiction to annul a marriage for impotency existing at the time of the marriage, and for causes that would invalidate any civil contract, there is no jurisdiction for divorce. The right of either consort to sue for separation from bed and board, corresponding to the divorce *a mensa et thoro* of the English Ecclesiastical Courts is well recognised. In the text of the Code, and under the earlier jurisprudence, a wife might demand separation on the ground of the husband's adultery only when he kept his concubine in the common habitation, but in modern practice a less biased view is taken, and as the husband's misconduct in certain circumstances is interpreted as outrage, ill usage or grievous insult, separation may be granted on that score.

While the provinces that have followed the English law have their own courts for the hearing of applications for divorce, it is generally recognised that they may, with the provinces of Quebec and Ontario, avail themselves of the wider advantages of a petition

to the Senate at Ottawa. The procedure followed in what is known as "Parliamentary Divorce" has been adapted from that which prevailed in England prior to 1858.

PARLIAMENTARY DIVORCE IN CANADA AND ENGLAND

It is to be noted, however, that Parliamentary Divorce in Canada is a very different thing from the Parliamentary Divorce that was formerly applied in England. The Parliament of the United Kingdom never did, and without changing the law or making a law for the purpose, it could not divorce a husband and wife *a vinculo matrimonii* unless they had been previously divorced *a mensa et thoro* by the Civil or Ecclesiastical Court, and unless the petitioner had obtained a verdict and judgment for damages in a separate action against the paramour. This decree, verdict and judgment had to be filed with the petition to the King, and they were an essential and indispensable part of the record. In this way the King and House of Lords had before them the previous findings of two competent courts upon the precise offences which were essential to the petition for a divorce. Even this, however, was not conclusive, for each petition was referred to a Committee of the House of Lords, who reinvestigated and scrutinised the facts and previous evidence of record to see that there was no collusion, nor anything to deprive the petitioner of the right which he sought.

POLICY OF SENATE

The Senate has followed the example of the House of Lords in appointing a committee to investigate the facts, but it has entirely dispensed with the other essential—that of the record of a prior suit before a competent court. The assumption of jurisdiction, therefore,

by the Senate of Canada under the British North America Act, has been criticised as a usurpation, it being contended that the passing of an individual act is not the adoption of a law. The authority of the Parliament of Canada in reference to divorce is confined to making a general law for the peace and order and good government of Canada, and it has been argued that dissolving marriage contracts one by one is not making a law, more particularly as there is no law available to the Dominion of Canada or the Parliament of Canada upon which it can act, or proceed to thus break the civil contract of marriage. Whether or no this be too narrow and strict an interpretation, Parliament has administered divorce since Confederation and, although it is undoubtedly eminently desirable that some general law of divorce should be adopted, there is little probability of the present jurisdiction being abrogated or curtailed until some general law had been introduced.

The late Senator Gowan, referring to this question of Parliamentary Divorce, said:

Whatever differences of opinion may exist on the subject of divorce, all will agree that the law which permits separation between man and wife—the dissolution of a sacred life tie—should be administered by a known and safe method, the causes of dissolution supported by reliable evidence, severely, calmly and discretely tested, and the enquiry conducted with some regard to legal form.

FEDERAL DIVORCE LAW

While it is apparent, therefore, that there is an urgent need in Canada for a general law of divorce, the reluctance of the Federal Parliament to draft legislation is explained by the opposition of the province of Quebec to any formal recognition of divorce. Under the present system, however, the resi-

dents of Quebec, whether Catholic or Protestant, are free to take advantage of the provisions for a Parliamentary Divorce, and the Ecclesiastical authorities can restrain such action only by their spiritual authority. The Church is fully within its rights in exercising its authority over its own adherents, but that authority should not be the cause of depriving other citizens of an opportunity to secure release, in simple and effective manner, from ties which are irksome and dishonouring.

The late Sir George Cartier, in explaining the matter, said that at the time of the formation of the Confederation, the question of divorce had been left purposely to be decided by the Federal Parliament, which had a Protestant majority, and taken away from the Legislature of Quebec, the majority of which were Catholic, because it was against the creed and conscience of Catholics to vote for divorce in any circumstances whatever. This was done in order that justice might be done to Protestants. The Catholic Bishops of Canada, knowing that the inhabitants of Canada formed a mixed community, approved of this course, and he (Sir George) had reason to believe the Holy See did so too. (*Dom. Parl. Debates*, 1890, p. 694).

A Federal law of divorce would not deprive the Church of its spiritual authority, and to orthodox and devout Catholics a resort to the courts would be no more permissible than is now a resort to Parliament.

A Federal law of divorce would, therefore, in no sense be an invasion of the rights of the Church. The excessive cost of a Parliamentary Divorce deprives the unfortunate poor of a right that should be equally available to all, and makes divorce a rich man's privilege.

A GREAT DETRIMENT

One of the unfortunate results of this condition of affairs is that many persons who find it impossible to secure divorce in Canada take advantage of the proximity of the United States, where many jurisdictions have so lax a system that divorce is encouraged and made easy. The law of Canada, even that of the province of Quebec (*Mignault I*, p. 551) recognises the validity of a divorce secured in a foreign jurisdiction when the parties have acquired a valid domicile therein, but it too often happens that the domicile recognised by individual states is a mere subterfuge, many divorces are secured by Canadians, the validity of which may be seriously questioned, and in several cases Parliament has refused to recognise an American divorce as valid and conclusive in Canada.

The laxity of divorce law in many of the states of the American Union has been widely criticised, and there has been, from time to time, in the neighbouring Republic a strong agitation in favour of the adoption of a general Federal law of divorce, bringing about uniformity, a higher respect for matrimonial obligation, and a stringency that would go far to check the tendency to early, unconsidered and careless marriages.

The moral and religious aspects of this question, although closely allied are by no means synonymous, for the Church in its reluctance to countenance any dissolution of the marriage tie, even in circumstances of flagrant wrong, and in its determined refusal to countenance the remarriage of divorced persons in any circumstances, does lend its support to the perpetuation of conditions that are regarded, by secular opinion, as highly immoral. The difficulty of securing divorce, it has

been shown, tends greatly to increase bigamy and other forms of licentiousness; and it is hard to avoid the conclusion that the atmosphere engendered by the hate and detestation of parents who are "the bondsmen of a luckless and helpless matrimony" must be seriously detrimental to the character of their unfortunate children.

The evidence of distinguished theologians before the Royal Commission on Divorce and Matrimonial Causes in 1910 shows how wide is the room for diversity of opinion, and there is an

ever growing sentiment that the Church will not command the general assent of enlightened Christian conscience if she imposes the same lifelong disability upon persons who, in the matrimonial relations, have proved themselves to be utterly culpable, and also upon other persons who, so far as all adducible evidence tells, must be held to be altogether innocent. By refusing remarriage the Church tacitly ignores the innocence of the injured and inflicts injustice on those who have suffered wrong.

The Labour Movement in Canada

By R. H. COATS

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CANADIAN trade unionism began in sporadic organization, drawing upon the usual inspiration. There were "labour circles" in Lower Canada prior to 1830, but of their nature and proceedings little definite is known. The printers and shoemakers of the cities of Quebec, Montreal and Toronto, following the radical traditions of their trades, were among the first to organize—in the 1830's and 1840's. But before 1850 the movement was negligible in Canada, and for reasons that are sufficiently obvious. Land in the old provinces was plentiful; the domestic system of production largely prevailed; and life was economically simple. The social and industrial unrest that swept over the United States and Europe between 1825 and 1850 was only faintly felt in Canada. Nor had Canada the educated and leisure classes whose leadership in philosophic radicalism so stimulated the labour movement in Great Britain during the second quarter of the last century.

GRADUAL BROADENING

From 1850 on the current broadened. There were strikes of printers, moulders and shoemakers in Toronto during the 1850's. The seaports, naturally in closest touch with the older countries, developed some vigorous unions. Most important of all, the movement in the United States began to flow over into Canada. In 1869 the "National" Typographical Union of the United States became the "International" Typographical Union, in token of its affiliation of Canadian local lodges. Thus by 1870 the main char-

acteristics of the Canadian labour movement were defined, or at least foreshadowed, as they have continued to the present. These are two-fold: the adoption of the forms and mechanism of the trade unionism of the United States; whilst the legislative programme and many of the ideas come from the mother country, whose common law prevails over the greater part of the Dominion. Quebec, with its differences of law and language, contributes an element at many points distinct.

It was the winning in Canada of the bitter contest just fought out in England—that, namely, for the repeal of the Combination laws—that first encouraged the Canadian unions to attempt a representative national assembly. The year was 1873. The Canadian Labour Union, as the new central body was named, was supported by 31 locals, though there were some 70 unions in existence by that time in Ontario alone. The Trades Council of Toronto had assumed the lead in calling the convention, but the example had been furnished by an "Industrial Congress" in the United States two months previously and by a "National Congress" in Great Britain in the year before. The Canadian Labour Union, with some initial successes to its credit in the way of legislation, waned with the bad times following the panic of 1873, and disappeared entirely three years later.

A CENTRAL LABOUR BODY

In 1883, however, and this time with more direct encouragement from the

United States, the attempt to form a central labour body in Canada was repeated, and after 1886 the Trades and Labour Congress of Canada became a permanent institution, meeting annually and consistently increasing in numbers and influence, though it ebbed at least once afterwards almost to the point of extinction.

As already indicated, the trade unionism of Canada has been largely derived in so far as working machinery is concerned, from the United States. In other words its craft unions are for the most part branches of organizations having their headquarters in the United States. There have been notable exceptions. The Provincial Workmen's Association of Nova Scotia, founded in 1879, ran a long and successful career as a purely Canadian organization, and there have been at least a dozen other instances of purely Canadian central craft unions. Nevertheless the bulk of the movement has always been part and parcel of the continental system, and much of the interest attaching to it lies in its adaptations of means to ends over the international boundary. It was an international union, for example, that drove out the Provincial Workmen's Association.

The Trades and Labour Congress itself is essentially a device whereby the functions which are performed by the American Federation of Labour in the United States may be exercised in Canada. Again, it was the struggle in the rank and file of continental trade unionism between the Knights of Labour and the American Federation of Labour which, transferred to Canada, led to the formation of the Canadian Federation of Labour in 1903—one of the purely Canadian bodies to which reference was made above. Numerous other instances might be added as illustrating how

many of the incidents in the history of the Canadian labour movement are but variations upon the theme of internationalism.

PRESENT UNIT OF ORGANIZATION

With this imperfect reference to history, the present outline must turn to a brief analysis of the movement in its present proportions. Since the year 1910 the Department of Labour has published a valuable report annually on the labour organizations of Canada, and the statistics which follow are from the latest of these issues. We may begin with the unit of organization and build up:

In 1921 the trade unions of Canada consisted of 2,668 local branches having a total membership of 313,320. This represents a falling off from 1919 and 1920, which were the high years in the movement, but it is approximately double the pre-war showing, which in turn represented a growth by seven times since the beginning of the century. By trades, the railway employees, with 82,000 members, and the building trades with over 30,000 members, are the largest groups (the largest single organization is the United Mine Workers with 20,000 Canadian members); whilst by provinces, Ontario with a membership of 66,771, Quebec with a membership of 44,057, and British Columbia with a membership of 16,899, head the list. Montreal leads the cities with 191 unions, Toronto standing second with 155, Winnipeg third with 94, and Vancouver fourth with 77. Over thirty cities have not less than twenty unions each.

Next to the local unit in the scheme of labour organizations stand various federations, trades and labour councils, etc., of which Canada has a considerable representation. Altogether there are in Canada 61 federations of trade unions, 42 district councils, and 60

trades and labour councils. The latter play a somewhat unique part in Canada—more aggressive than the similar bodies of the United States, and in greater harmony with the general labour movement than has been achieved in Great Britain.

Of the local unions, 2,223 with a membership of 222,896 are international. Altogether 98 international organizations have established one or more local branches in Canada. It may be noted, however, that there are 140 distinct craft organizations operating on the North American continent.

TRADES AND LABOUR CONGRESS

At the apex of the international system in Canada stands the Trades and Labour Congress, whose function as daughter or sister body to the American Federation of Labour has been briefly noted. It may be remarked that, just as the American Federation of Labour does not represent all the 140 unions of the continent, so in Canada only 84 of the 98 international groups are represented in the Congress. In Canada, as in the United States, the chief bodies holding aloof from the federated system are the Railway Brotherhoods, which for various reasons prefer to work by themselves, *i.e.*, through delegate bodies, "legislative boards," etc., made up entirely from their own membership. The Congress, however, is *par excellence* the Canadian Parliament of Labour, and its career, now in its thirty-sixth year, may be said to constitute the history of the labour movement in Canada.

ORGANIZATIONS FORMED IN OPPOSITION

An international organization formed in opposition to the union on trade lines as represented by the Congress

and the American Federation of Labour is the Industrial Workers of the World. After a turbulent career it has all but disappeared from Canada. Likewise in opposition to existing forms of labour organization is the "One Big Union," formed in Calgary in 1919, whose career reached its climax in the most sensational incident in our trade union history, the Winnipeg strike of 1919. The One Big Union is industrial and socialistic, its aim being to hasten the day "when production for profit shall be replaced by production for use." At the end of 1919 it numbered 101 branches with a membership of 41,150, but this had shrunk to 35 branches with 5,300 members in 1921.

A CATHOLIC FEDERATION

There are left the purely national trade unions of Canada. Of these the Canadian Federation of Labour, already briefly mentioned, consists of 32 branches with a membership of 7,300. A new departure of more recent origin is the Federation of Catholic Workers of the Province of Quebec; as the name would imply, membership is confined to adherents of the Roman Catholic faith. The earliest local union of the kind was formed in 1912, but by 1918 the movement had progressed sufficiently to warrant a general conference at which 27 unions were represented. Two years later a conference of 225 delegates representing 120 unions with a reported membership of 40,000 created a permanent organization under the above title. Vigorous opposition to organization on creedal lines has been offered by the Trades and Labour Congress and the conflict has been aired in Parliament. The latest list of the Department of Labour shows 120 unions in affiliation with the Federation.

RELATIVE STRENGTH OF TRADE UNIONISM

Trade unionism in Canada is relatively weaker in point of numbers than in England. It is weaker also than in the United States, a result of the preponderance of agriculture in the Canadian industrial scheme. But its progress in recent years has been very rapid, and it is steadily increasing in individuality. It furnishes today one of the most interesting fields in which to study the evolution of Canadian institutions under the reaction of influences from Great Britain, bound to us by the political tie, and from the United States, so strong by economic position.

Nowhere is the above more clearly illustrated than in the political programme of organized labour. In the United States the labour movement is out of politics. In Canada, on the contrary, though action is still to be described as tentative, the tendency is to follow British example. Labour had a representative in the Canadian Parliament as long ago as the seventies. In 1900 the Trades and Labour Congress pronounced for independent political action, though it was not until 1917 that this policy crystallized in the organization of the Canadian Labour Party. In the last Federal election 30 straight labour candidates were in the field, with 37 "farmer-labour" nominees and one "labour-liberal." Two "labour" and five "farmer-labour" members were elected. In addition the Trades and Labour Congress sought pledges on a series of eleven questions from other candidates. Each province has its branch of the Labour Party, and there is a sprinkling of labour members in provincial legislatures, Alberta having the strongest contingent with four.

FLEXIBILITY OF TRADE UNIONISM

As above stated this is in the British rather than in the American tradition. Even wider is the gap between the American Federation of Labour and the Trades and Labour Congress in what may be termed international politics. Whereas the American Federation of Labour has somewhat acrimoniously refused to throw in its lot with the newly organized International Federation of Trade Unions, which took over the affairs of the old International Secretariat after the war, the Dominion Trades and Labour Congress has been a consistent member since 1920, basing its action on the association of Canada with the British Empire and also with the League of Nations—a striking instance of the flexibility of trade unionism on this continent and its capacity to reconcile homeogeneity of working machinery with diversity of corporate aim.

SOCIALIST MOVEMENT

The Socialist movement lies rather outside a sketch like the present, but there is a Socialist Party in Canada which ran five candidates at the recent election—all unsuccessfully. As already hinted, socialistic propaganda within the ranks of labour reached its maximum in the incidents preceding the Winnipeg strike of 1919. The Winnipeg strike, however, was a strike of trade unionists on orthodox lines, and the failure of the radical element to realize the significance of its initial success—or in fact to provide for it—revealed conclusively the weakness of the Socialist movement and its lack of any real hold on labour opinion. Socialism in Canada is essentially a western phenomena and it has made no headway with official trade unionism.

Unemployment and Organization of the Labour Market

By BRYCE M. STEWART

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I. UNEMPLOYMENT

UNTIL quite recently Canada had no statistical measurement of unemployment although for a number of years the *Labour Gazette* published monthly reports from correspondents on the employment situation in their localities. It could scarcely be expected that any official effort at measurement and analysis of unemployment should be inaugurated in the unprecedented industrial expansion which began about the first of the century and continued, with but slight interruption, until 1914. True, in the occasional slack times of this period there was sharp distress in the larger cities, but the responsibility for unemployment was generally held to rest upon the municipalities in the first instance, in the second place upon the provinces, and only very remotely—if at all—upon the Dominion Government.

HIGH WATER-MARK

In 1913 it was evident that the long boom period was over. There was much hardship in the winter of 1913-14 and it is doubtful if the volume of unemployment during the following winter has ever been exceeded in the history of the country. The spring absorption of labour was insignificant and in 1915 city dwellers were confronted with the unusual spectacle of long queues of men waiting for relief in midsummer at the civic charity departments. Delegation after delegation contended that the Dominion must accept some responsibility for the unemployment arising from the com-

pletion of its railroad building program and for the thousands of unemployed immigrants admitted by the Federal Department of Immigration. It was urged also that the further unemployment involved in the industrial readjustment after the outbreak of war was obviously at the door of the Government in Ottawa. The Cabinet, however, pinned its faith to recruiting and munitions orders as correctives of the situation and the appointment of an unemployment commission, much desired in some quarters, was refused.

The pressure of unemployment in these years stimulated interest in public employment offices and employment statistics and at the end of 1915 the Labour Department for the first time sent a questionnaire to trade unions to ascertain what proportion of their members were unemployed. The same questionnaire was issued in June of the next year and quarterly thereafter until 1919, when in anticipation of demobilization the enquiry was placed on a monthly basis and has so continued.

The accompanying table, based on these union reports, shows the closer application of the labour force year by year during the remainder of the war period, the post-bellum unemployment of the winter of 1918-19, the resumption of activity during the fictitious prosperity of 1919-20, and the wasting job famine which began in the autumn of 1920 and except for some seasonal activity in the following summer did not abate until the upward trend of recent months.

PERCENTAGE OF MEMBERS REPORTED UNEMPLOYED BY TRADE UNIONS

	1916	1917	1918	1919	1920	1921	1922
January 1.....	8.7	2.1	2.4	2.7	4.2	13.1	15.1
April 1.....	...	2.1	1.6	4.1	3.1	16.5	9.6
July 1.....	2.1	1.2	.5	3.1	2.1	13.2	5.3
October 1.....	1.4	1.7	.7	2.5	13.9	8.5	2.8

A REGULAR SYSTEM OF REPORTS

In 1919 the newly organized Employment Service instituted a system of reports from representative employers in every important industry. The following table, showing employment as reported by employers, is based on the number of employees actually at work on the reporting date in the es-

the union membership, would have more regular employment than the general body of workers covered by the employers' returns.

In 1919 also the Employment Service began to issue statistical reports of the applications for employment and the demand for labour recorded at its 75 local offices. These statistics throw light on labour turnover rather than

EMPLOYMENT AS REPORTED BY EMPLOYERS

(Number of employees on January 17, 1920 = 100)

	1920	1921	1922
January 1.....	100 (Jan. 17)	87.7	77.9
February 1.....	100.6	90.1	78.9
March 1.....	101.2	88.0	81.9
April 1.....	101.7	84.1	80.8
May 1.....	104.6	84.1	83.3
June 1.....	106.2	86.6	80.2
July 1.....	109.1	87.5	91.1
August 1.....	108.3	88.9	93.1
September 1.....	107.5	88.7	93.7
October 1.....	108.2	90.2	94.6
November 1.....	104.4	90.4	95.8
December 1.....	100.3	87.1	95.1

tablissements making returns in comparison with the working force indicated by the same firms at the middle of January, 1920, when the publication of the returns was begun. The figures indicate the same general trend as those derived from the trade union reports although the latter do not show so much fluctuation. It could probably be assumed that skilled tradesmen, who constitute such a large proportion of

employment. They show when, where, and in what numbers employers and workers come into the labour market and the volume of transactions. The wage rates—the "high" and "low" of the different occupations in the market—are also available in the reports forwarded to Dominion headquarters by the local offices, but as yet this information has been given to the public only once.¹

¹ *Employment*, November 15, 1921, p. 9.

VALUE OF EMPLOYMENT STATISTICS

There has been, therefore, a marked development in Canadian employment statistics in the past few years and the official reports on the employment situation published in the *Labour Gazette* are now based on the new statistical data instead of the monthly statements from correspondents. As Professor Gilbert Jackson says:

Had we possessed in 1914 the body of information which was afterwards collected, we should have been able to base on knowledge decisions which rested then on bare conjecture.

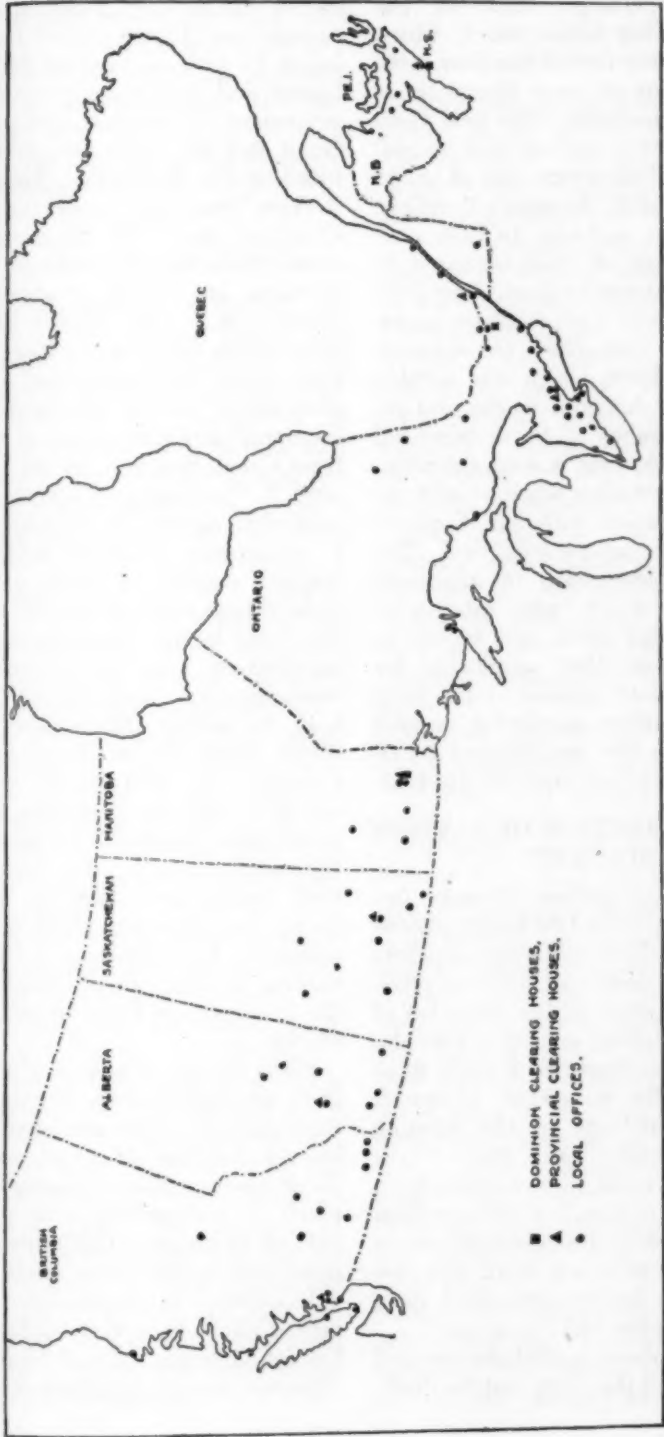
While unemployment in the recent depression was perhaps as great as in 1914-15 there was much less hardship. Demonstrations of the unemployed were noticeably few and poorly patronized. Savings and household goods accumulated during the floodtide of war employment served as a kind of unemployment insurance and Government effort at amelioration was more serious and on a larger scale than ever before. In order to meet the problem of unemployment among the demobilized soldiers in the winter of 1919-20, the Federal Government provided financial assistance for all necessitous cases. Relief was not given to any unemployed ex-service man unless he had registered at the nearest local office of the Employment Service of Canada. The expenditure under this scheme was expected to mount into the tens of millions, but when relief was discontinued late in April, 1920, the total disbursement among 43,382 ex-service men was \$4,629,803.70.

GOVERNMENT GIVES FINANCIAL AID

The Dominion Government shared directly in the cost of unemployment relief with the municipalities and provinces for the first time in the winter of

1920-21 on the theory that the prevailing unemployment was in large measure consequent upon the war. Indeed the provinces had assisted the municipalities with unemployment relief only on rare occasions. In a memorandum issued December 24, 1920, the Government urged that in as far as possible the situation should be met by the provision of work instead of relief, but agreed to bear one-third of the cost of any necessary relief if the distribution were organized by the municipal authorities. It was expected that the provincial governments would also meet one-third of the relief expenditure. Applicants for relief were required to register at the local office of the Employment Service and to secure a certificate that work was not available. Thirty-one municipalities in six provinces took advantage of the offer and received about \$500,000 from the Dominion treasury, indicating a total expenditure on unemployment relief of \$1,500,000. The Dominion Government accepted full responsibility for the relief of handicapped ex-service men out of employment, and about \$1,200,000 was expended in this way.

The Government pursued this policy still further the following winter. An order-in-council of October 7, 1921 (P. C. 3831) announced that if a municipality should undertake any work during the winter months in order to provide employment and would bear the cost of carrying on the project in the usual working season, the Government would share the difference between the actual cost and the estimated normal cost equally with the municipality and the province. The Government also agreed to continue to refund to the municipalities one-third of their disbursements on unemployment relief. Both proposals were subject to the condition that the provinces should share in the expense equally with the Dominion.



MAP SHOWING DISTRIBUTION OF THE OFFICES OF THE EMPLOYMENT SERVICE OF CANADA

The slight changes made by the Mackenzie King Government, which took office at the first of the year, were in the direction of more liberal terms to the municipalities. The new Government agreed to pay one-half instead of one-third of the excess cost of works undertaken during the winter to relieve unemployment and also to bear one-half of the cost of relief extended to unemployed ex-service men. The Federal Government's expenditure under this scheme amounted to approximately \$1,225,000, which was divided about equally between works and relief. The number of those benefited under the works plan was considerable, especially as rotation schemes were set up in coöperation with the Employment Service in several localities. The measure of supervision of municipal expenditures which was introduced under the relief plan, and especially the requirement that applicants for assistance should register at the local employment office, marked a decided advance upon the promiscuous relief-giving so widely prevalent in 1914-15.

II. ORGANIZATION OF LABOUR MARKET

The early Canadian farmers frequently followed the Old World custom of hiring their help on yearly contracts at the annual fairs and this was probably the first stage in the evolution of an organized labour market in Canada. Farm help was recruited for the most part from the somewhat numerous sons and daughters of the farming community itself. True, there was a sprinkling of immigrant workers from the United Kingdom, but the Canadian youth, trained in the many-sidedness of agriculture in a new land, was preferred to the highly specialized farm labourer from the Old Country.

This local labour market disappeared with the rise of the cities and the draft-

ing of the country youth into urban occupations. Under protest the farmer began to look to immigration for his labour and found some relief in the movement of orphan children from Great Britain to the Dominions instituted by Dr. Barnardo. These young workers were more easily adapted to Canadian farm life than the adult British farm labourer and now numbers of them are found in almost every countryside. The dearth of native farm labour and the resultant dependence upon the immigrant prompted government action to stimulate the immigration of farm workers, especially from Great Britain. In the winter of 1906-7 "Canadian Government Immigration Agents" were appointed on a commission basis in nearly every farming district of Ontario and the eastern townships of Quebec to report the local labour requirements. This information was forwarded to the representatives overseas who undertook to recruit the workers and to direct them to the local agents in Canada. In 1914 there were 100 agents in the two provinces and their placements totalled from four to five thousand annually. The regular salaried immigration officials in some thirty cities directed about 20,000 immigrants to employment annually, making a total annual placement for the Immigration Department of about 25,000.

Since the war a women's branch has been established in the Department of Immigration. This new agency, which has the assistance of an advisory council of representative women, has done much in coöperation with provincial officials to promote the immigration of household workers from Great Britain.

In addition to the Dominion Government's effort to recruit workers in the United Kingdom, some of the provincial departments of agriculture have main-

tained representatives overseas, each of whom has been engaged in persuading people to migrate to his particular province as farmers or farm labourers. Before the war the Ontario Government was securing about 4,000 workers annually in this way.

PUBLIC EMPLOYMENT OFFICES

The establishment of public employment offices began during the period of industrial development which ended in 1913, when railroad and building construction and expanding industry were seeking labour as diligently as farming. But the few offices of this period were not designed to measure the labour demand of the community and to recruit the workers required. In most cases they were established in the lean years; their viewpoint was philanthropic rather than industrial, and with the return of good times they generally disappeared, although sometimes retained as agencies of aldermanic patronage. The Ontario Government appointed a few part-time employment agents during the slackness of 1907-8, and while they were maintained for almost a decade their work was negligible.

To Quebec is due the honor of enacting the first legislation for the establishment of employment offices. "An Act respecting the Establishment of Employment Bureaus for Workmen" was passed in 1910 and three offices were opened. But the annual budget as late as 1915 was only about \$15,000; the officials were underpaid and the placements did not exceed 7,000 or 8,000 per annum. The provinces of Manitoba, Saskatchewan and Alberta were accustomed to open temporary employment offices for the distribution of farm hands during the grain harvest but no permanent employment exchange was established.

ABOLISHMENT OF PRIVATE EMPLOYMENT AGENCIES

With the unemployment which appeared in the winter of 1913-14 both the Dominion and provincial governments began to consider the need for better organization of the labour market. The British Columbia Royal Commission on Labour, reporting in 1914, recommended the abolition of private employment agencies and the establishment of provincial public employment offices and indicated their preference for a national system of employment exchanges. Some months after the outbreak of the war the results of a departmental enquiry on unemployment, undertaken by the Federal Department of Labour in 1914, which included a plan for a nation-wide system of public employment offices, were placed at the disposal of the Ontario Commission on Unemployment.

Despite its provincial limitations the Commission, reporting in 1916, favored "an effective national system" of employment offices as well as the establishment of provincial offices. The Ontario Government enacted legislation to implement the Commission's recommendations with regard to provincial employment offices in 1916. British Columbia followed this example in 1917, Manitoba in 1918, and Saskatchewan and Alberta in 1919. The three last mentioned provinces provided in this legislation for the abolition of private employment agencies and in 1919 British Columbia passed a separate statute to that effect. With private agencies abolished by law throughout the West, Nova Scotia followed in a statute of 1920 and the Ontario Government at the 1919 session authorized a reduction in the number of commercial agencies. Quebec has not granted any new private

employment agency licenses in recent years and in the two remaining provinces—New Brunswick and Prince Edward Island—the number of such agencies is negligible.

EMPLOYMENT OFFICES' COÖRDINATION ACT

The war need of conservation of labor and apprehension of the difficulty of reabsorbing the soldiers gave rise to a demand for some better organization for labour distribution than the ten or twelve uncoördinated employment offices established by the provinces of Ontario and Quebec. Accordingly, in 1918, the Dominion Government passed the Employment Offices' Coördination Act, which authorized the Minister of Labour to aid and encourage the organization and coördination of employment offices and to promote uniformity of methods among them; to establish clearing-houses for the interchange of information between employment offices concerning the transfer of labour and other matters; and to compile and distribute information received from employment

Government amended the Act to permit of this in 1920 and the larger municipalities of the province responded. With the encouragement afforded under this legislation the number of offices increased to 95 during the full tide of demobilization, and at present the number of offices is 75.

The expenditures of the provinces for the maintenance of employment offices under the Act have been as follows: 1918-19, \$107,231.98; 1919-20, \$338,415.22; 1920-21, \$467,781.50; 1921-22, \$478,538.02. Subventions amounting to one-half of these sums have been paid over to the provinces by the Dominion Government and in addition the expenses of the Employment Service Branch of the Department of Labour at Ottawa and its clearing-houses at Halifax and Winnipeg have come from the Federal treasury.

PRESENT AND FUTURE OF THE EMPLOYMENT SERVICE

The following table gives the placements of the Employment Service since its inauguration:

YEAR	REGULAR	CASUAL	TOTAL
1919 (10 months).....	268,001	37,904	305,905
1920.....	366,547	79,264	445,811
1921.....	280,518	75,238	355,756
1922.....	297,827	95,695	393,522

offices and from other sources as to employment conditions.

In a short time agreements were completed with all the provinces except New Brunswick and Prince Edward Island. The latter has a population of about 90,000, mainly rural, and did not feel any need for action, while in New Brunswick the Government took the view that the municipalities should share in the expense. The Dominion

Soon after the organization of the Employment Service of Canada¹ a system for the clearance of labour between the different offices was established. All the larger railways granted a special transportation rate for the use

¹ For a more detailed account of the organization of the Employment Service see *The Employment Service of Canada*, Bulletin of the Department of History and Political and Economic Science in Queen's University, Kingston, Ontario, Canada—No. 32. July 1919.

of persons sent to employment at a distance through the Service, and about 50,000 are transported under this arrangement annually.

The central advisory council, called the Employment Service Council of Canada, has contributed materially to the development of the organization. This body, which was established by order-in-council soon after the Employment Service began to function, now has 23 members, of whom eight are representatives of the provinces that have established employment offices under the Federal law. The Canadian Manufacturers' Association has two members, and the Association of Canadian Building and Construction Industries, the Railway Association of Canada and the Canadian Lumbermen's Association each have one member. The Trades and Labour Congress of Canada has two representatives; the Canadian Railway Brotherhoods, one; the Great War Veterans' Association, one; the Canadian Council of Agriculture, two; the Department of Soldiers' Civil Reestablishment, one; and the Department of Labour, three, two of whom must be women. With the recommendations of this advisory body for its guidance in dealing with such controversial matters as wages and hours, and industrial disputes, the Employment Service has been able to follow a course that has commended it to both employers and employees.

The Employment Service Council has shown a marked interest in specialized employment work for juveniles and business and professional workers and on its recommendations promising beginnings in the provision of more ad-

equated facilities for such persons have been made in some of the larger cities.

Local councils have been established for several of the employment offices of the Service and provincial advisory councils have been appointed in Ontario and Alberta, a step which will probably be taken eventually by all the coöperating provinces. These Employment Service Councils should prove efficient agencies of community organization in the struggle against unemployment.

One may venture the prediction that the Employment Service of Canada is destined to play an important rôle in the Canadian industrial drama. Its work lies before. Little more than the setting up of this nation-wide machinery could be hoped for in the four years since the law was passed. The coöperation established with the Department of Immigration will no doubt be continued and extended as well as the relationship with the passenger departments of the railways for the better recruiting and distribution of labour for the western harvest. There is opportunity also for a closer dovetailing of occupations and a well-prepared plan for the transfer of workers in the autumn from farming and railway maintenance to lumbering and for their return in the spring which should commend itself to all parties. Some day there should be opportunity to attack the problem of casual labour at our sea and lake ports and to undertake other lines of endeavor for the regularization of employment. Better organization of the labour market alone will offset the disadvantages under which we labour to attract and retain workers from other lands.

Arbitration and Conciliation in Canada

By R. M. MACIVER, M.A., D. PHIL.

Professor of Economics, University of Toronto

CANADA has had its fair share of those industrial experiments which look towards the maintenance of peace within the wage system. Many of the expedients tried in the States, whether by individual firms (such as the Imperial Oil Company) or by trades (such as the garment-making trades) have been carried over into Canada, owing to the continuity of industry across the tariff line. On the other hand British influence has been manifest in the interest taken in joint industrial councils after the Whitley model, though, outside of the building and construction trades, it cannot be said that this interest has had any important results. A Royal Commission on Industrial Relations, which reported in 1919, advocated the principle of Joint Industrial Councils, and a certain number of such councils were established, but they have on the whole been of little significance.

Of a different character is the Joint Council of Industry, officially established by the province of Manitoba in 1920. This Council, consisting of five members, two being representative of employers, two of employees, with an "impartial chairman,"

was given wide powers of intervening in industrial disputes, either actual or threatened, investigating conditions of employment, cost of living and other matters. . . . The Joint Council, which was appointed in April, 1920, reports considerable success in averting strikes and lockouts. Out of twenty cases of differences between employers and workers dealt with during the first year of operation, settlements acceptable to both parties were effected by the Joint Council in eighteen cases (*Labour Gazette*, December, 1921).

In its report for the following year the Council states:

During the year thirty-six cases of dispute have been dealt with. In thirty-two of these cases the Council was able to effect a removal of differences and a settlement of the dispute (*Labour Gazette*, March, 1922).

Mention should also be made of the efficient operation of the Canadian Railway Board of Adjustment, No. 1, established by joint agreement between the Railway Association of Canada and the six large unions of railroad employees. As this body, however, is on identical lines with the U. S. Railway Board of Adjustment, No. 1, its activity does not need further consideration here.

THE INDUSTRIAL DISPUTES ACT

The really distinctive Canadian experiment is of course the Industrial Disputes Investigation Act of 1907, passed as the result of a protracted strike in that most troubled of all industrial fields, the mining of coal. Nowhere are strikes more prolonged, more bitter, more frequent, and more disastrous to the public than in the production of that absolutely vital commodity. The strike of 1906 in southern Alberta brought this fact forcibly before the Government and made a great impression on Mr. Mackenzie King, then Deputy Minister of Labour, and now Premier of Canada. The resulting Act was of an ingenious and somewhat unusual nature. It might be described as a compromise between conciliation and arbitration. In its full sense arbitration implies a tribunal whose verdict is binding on the parties to the dispute. That is

not required by the Act under consideration. It forbids under penalty the declaration of a strike or lockout prior to or during reference of the dispute to a board, in such cases as come within the scope of the Act. The board, if constituted, must expeditiously enquire into the case and attempt a settlement. Its verdict need not be accepted by either side, and after its deliverance a strike or lockout again becomes legal.

Such a device was not entirely novel, but it was framed in a way which showed a distinctive grasp of the difficulties involved in all intervention by government in industrial issues. In the first place it was to apply only to industries where a paramount public interest required the preservation of peace. These are described as

any mining property, agency of transportation or communication, or public service utility, including, except as hereinafter provided, railways, whether operated by steam, electricity, or other motive power, steamships, telegraphs and telephone lines, gas, electric light, water and power works.

The term "public utility" is notoriously hard to define and is not defined further in the Act. Thus there remains a certain discretion to the Minister to decide, by granting or withholding a board, whether or not, say, a particular form of municipal service comes within the scope of the Act. In the second place one or other of the parties to the dispute must apply for a board before the machinery of the Act can be set in motion, and provision is made to ensure that such request is really at the instance of the authorized representative of the company or of the employees concerned.¹ In the third place the Act requires a declaration

that negotiation between the parties has reached the breaking-point, so that a strike or lockout will result apart from intervention.

The Act thus reduced compulsion to a minimum. There is nothing here of the bold intervention by government which we associate with compulsory arbitration as applied in New Zealand and Australia or recently in Kansas. The compulsory clauses are meant merely to ensure the delay and opportunity requisite for investigation, and it would seem a most reasonable and minimal demand that, where a cessation of work would dislocate the economic life of the whole community and where at least one of the two disputants is willing to appeal for a board of investigation, the law should insist that such a board be at least allowed to meet and function ere resort be made to the ultima ratio of strife.

It was natural that an Act so framed should attract very considerable attention outside of Canada. Numerous articles have appeared in popular and economic periodicals of various countries describing its operation. It has been the subject of a special report to the British Board of Trade by Sir George Askwith, a distinguished and successful mediator in industrial disputes. The U. S. Bureau of Labour Statistics has issued a number of reports on the subject, the most complete being one by Mr. Benjamin Squires, published in 1918 (Bulletin No. 233). At various times from 1907 to the present day it has been advocated in the legislative assemblies of other states, and one American state, Colorado, has had in operation since 1915 an Act built on the Canadian model.

WHAT OF ITS SUCCESS?

What then has been its success during these sixteen years of operation? The latest annual report on the opera-

¹ It should be observed in passing that the Act provides also for the reference of disputes in industries not coming within its restrictive definition, on request from *both* the parties involved, an arrangement of which advantage has occasionally been taken.

YEAR ENDING MARCH 31, 1922

INDUSTRIES AFFECTED	NO. OF APPLICATIONS FOR BOARD RECEIVED	NO. OF BOARDS ESTABLISHED	NO. OF STRIKES NOT AVERTED OR ENDED
I Disputes affecting mines, transportation and communication and other public utilities.....	40	22	1
II Disputes not falling clearly within the direct scope of the Act.....	14	9	0
Total, all classes.....	54	33	1

PERIOD FROM MARCH 22, 1907, TO MARCH 31, 1922

I Disputes affecting mines, transportation and communication, other public utilities and war work.....	448	..	32
II Disputes not falling clearly within the direct scope of the Act.....	110	..	2
Total, all classes.....	558	..	34

tion of the Act (*Labour Gazette*, July, 1922) may be summarized as shown above:

This makes an excellent return, but before we draw conclusions there are some important questions to be answered. We have to remember in the first place that the object of the Act is to prevent strikes in certain crucial industries, not merely to adjust such disputes as are referred to boards constituted under it. How far then

has it prevented strikes? Let us take first the coal-mining industry, whose troublesome character was most responsible for the framing of the Act. The Report on Strikes and Lockouts, 1901-16 (Department of Labour), gives us the following far from hopeful figures. (See chart below.)

It has to be admitted that the later periods were marked by growing unionization in the coal-mining industry and that the most protracted dis-

PERIOD	NUMBER OF DISPUTES IN MINING INDUSTRIES	NO. EMPLOYEES AFFECTED	TIME-LOSS IN WORKING DAYS
1901-5.....	37	27,732	647,172
1906-10.....	50	33,997	1,510,307
1911-5.....	29	26,231	2,570,688

putes were those concerning recognition of the union. This is an issue in which the respective parties are generally least willing to accept arbitration. But making all allowances we must acknowledge the failure of the Act to establish even a degree of industrial peace within this sphere. This is very evident if we consider the time-loss in coal mining alone, which showed an increase of 265.4 per cent in the period 1907-12 as compared with the period 1901-7.

Other industries within the scope of the Act present results less unfavourable, but only in transportation is there conclusive evidence of a decrease in time-loss through strikes since the passing of the Act. In the industries included under "general transport" the time-loss for the period 1901-5 was 411,778 working days while for the period 1911-5 it was only 212,139 days. All comparisons of this sort are of course subject to difficulties of interpretation, but it seems likely that the relatively stable and generally well-organized series of transport industries offer the most hopeful field for an act of the kind we are considering.

PENAL PROVISIONS

If the Act has been so partial a success, what of its penal provisions? Section 58 prescribes that

any employer declaring or causing a lockout contrary to the provisions of this Act shall be liable to a fine of not less than \$100, nor more than \$1,000 for each day or part of a day that such lockout exists.

Section 59 provides for a fine of not less than \$10 nor more than \$50 per day in the case of any employee who strikes contrary to the Act. These are drastic enough provisions, but they have never yet been enforced. Rarely has judicial action followed an illegal strike, and even when it has the penalty

has not been enforced. Mr. Mackenzie King once declared that "the government has never laid particular stress upon the penalty end of it." This, in light of the fact just cited, is a very mild expression of the failure of compulsion. Sir George Askwith has rightly pointed out that whatever measure of success the Act has achieved is outwith its compulsory features altogether, and

lies in permitting the parties and the public to obtain full knowledge of the real cause of the dispute and in causing suggestions to be made as impartially as possible on the basis of such knowledge for dealing with existing difficulties, whether a strike or lockout has commenced or not. This action on behalf of the public allows an element of calm judgment to be introduced into the dispute which at the time the parties themselves may be unable to exercise.

It may well be questioned whether penal provisions which remain a dead letter are not worse than useless, whether it would not be better to dismiss the discredited and therefore politically unwise enforcement clauses so that the Act shall stand simply as a machinery for conciliation.

A MACHINERY FOR CONCILIATION

As such, it has undoubtedly achieved a degree of success. What the official reports of its working really go to prove is that where the parties to a dispute are well disposed towards the Act it can serve a useful function. This in fact is all that in the light of the history of arbitration and conciliation can be claimed for any act of the kind. Where there is on either side a deep-seated resentment with economic conditions, compulsion has proved, on both political and economic grounds, a futile proceeding, leading in the long run to contempt for the law. The machinery of the Act seems in general as well-de-

vised as any such instrumentality can be, and where it fails it is because of conditions in which outside intervention, at the moment when a rupture is imminent, is powerless. It must not be forgotten that arbitration assumes the general *status quo* of industry and can function only where neither party violently objects to it.

The Act has been, within these limits, well administered no less than well conceived. There is always a difficulty in the appointment of an "impartial chairman" in these matters, but less objection than perhaps might have been expected has been made to the choice of the minister when, as not infrequently, the disputants failed to agree in nominating one. Nor is it fair to say outright that labour in Canada is opposed to the Act. This charge was made by Mr. Garretson, President of the Order of Railway Conductors of America, in the issue of *The Annals* for January, 1917. Mr. Garretson declared that "no weapon as potent as this Industrial Dispute Act has been devised for defeating the legitimate efforts of labouring men to better their conditions." It would be a gross exaggeration to say that this statement represents the present attitude of organized labour in Canada. It is true that there have been occasions when the Dominion Trades and Labour Congress has denounced the Act. But on the whole organized labour is at present inclined to accept it. Of late years, in their annual demands for legislation, they have not asked for the appeal of the Act, but for minor amendments. Thus in January of the present year they requested the Government

to impose penalties on companies or corporations violating Section 57 of the Act, to compel parties seeking a change in wages or conditions to make application for a board, in case an agreement is not reached; to substitute in the application for a board, in place of the declaration under oath "that to the belief of the declarant a strike or lockout will be declared" a simple declaration of failure to reach an agreement by direct negotiation (*Labour Gazette*, February, 1923).

It should be explained that Section 57 insists on "employers and employees giving 30 days' notice of an intended change affecting conditions of employment with respect to wages or hours," and also forbids either of the parties affected from altering these conditions "in the event of such intended change resulting in a dispute, until the dispute has been finally dealt with by a board."

EMPLOYEES FAVOUR ACT

If further evidence is necessary, it may be found in the fact that the overwhelming majority of the applications for a board have come from the side of the employees. In fact Canadian labour would for the most part look with favour on the widening of the scope of the Act to include such concerns as the Hydro-Electric Commission of Ontario. The Industrial Disputes Investigation Act has therefore not broken down. Every month boards are set up for the adjustment of difficulties which otherwise would probably lead to open strife. Its moderate character has given it an assured if limited function, and it fulfils that function today at least as successfully as at the time of its inauguration sixteen years ago.

Political Developments within the Labour Movement in Canada

By J. S. WOODSWORTH, M.P.

House of Commons, Ottawa

TO understand the Canadian labour movement, one must bear in mind the general characteristics of Canadian life. Until very recently Canada was predominantly agricultural. There was abundant free land and in the rapidly growing settlements there were almost unlimited opportunities for successful activity. Under these circumstances, the people generally developed considerable initiative and a strong individualism.

Owing to its isolated position, Canada had little interest in world affairs. Political questions were largely local and did not command the attention of the majority of the people who were immersed in their own personal affairs.

With the opening up of the West, the completion of the transcontinental railways, the development of industrialism, the influx of a large number of immigrants and the establishment of world relationships, Canada entered upon a new period of activity. Many Canadian farm boys passed directly into good positions in the industrial, commercial and financial life of the country. The larger business enterprises realizing the value of favourable legislation and administration were easily able to gain control of the machinery of government. Intent on "making money" or getting a start in the New Land, most of the people still remained indifferent to public affairs.

Then came the war sweeping everything before it. Now after the war's disillusionments and after waiting

vainly for the prosperity which was confidently declared by the leaders to be "just around the corner," a people untrained in political life face the difficult task of reconstruction.

MANY DIFFICULTIES PRESENTED

This task is rendered much more difficult because of the vast territorial extent of Canada and the great differences which separate the various sections. This handicap to united action is felt keenly in the labour movement. There is a wide gap between the miners of Cape Breton and the textile workers of Montreal or the members of the building trades of Toronto. A thousand miles of wilderness separates Toronto from Winnipeg, the distributing center for the prairies. Then it is another fifteen hundred miles before we reach the loggers and fishermen of the Pacific.

The situation is rendered still more complicated by the mixed population. Catholic French-speaking Quebec is very different from Protestant English-speaking Ontario. A large portion of the skilled labourers, especially in the West, are English or Scotch with several generations of industrial training behind them. A considerable part of the unskilled labourers come from the various countries in Europe and on the west coast from the Orient, and must face the easily evoked prejudice against "foreigners."

SOURCES OF THE MOVEMENT

Within the Canadian labour movement itself we can trace the various

streams of thought that are making their contribution. First of all is the sturdy independence and practical resourcefulness and yet narrowness of outlook of the native-born Canadian. Modifying or reinforcing this is the policy of the American Federation of Labour with which the majority of the Canadian organizations are affiliated, and under the influence of which their policies have been largely determined.

Again there is the radical continental Socialism which in this country has been broadcasted through the American publishing firm of Kerr and various American labour journals. More recently there is evident the great influence of the British labour movement from which so many workers in Canada have come and with which they keep more or less in touch. Lastly, we have the world-wide dynamic of the Russian Revolution, which as a vast experiment in Proletarian rule may be said to have captured the imagination of the workers the world over.

Up till very recent years, the organized labour movement took comparatively little interest in politics. The policy of the American Federation of Labour did not encourage independent political action. Under the influence of American headquarters the actions of the United States courts and state legislatures were probably more discussed in Canadian unions than were those of the Canadian provinces.

Gradually, however, under the stimulus of immigrant English and Scotch workers, the local trades and labour councils began to appoint labour representation committees. These endorsed or nominated candidates for municipal and sometimes Parliamentary office.

IMPETUS OF OUTSIDE INFLUENCES

Outside the unions but having a great influence in their discussions arose various Socialist organizations,

which devoted most of their energies to propaganda work. The most aggressive of these was the Socialist Party of Canada, with its headquarters in Vancouver. Its organizers had come from the western states. It boasted an ultra orthodox and uncompromising Marxianism. Through its persistent propaganda by meetings and literature it has exercised a very wide influence in Canada. Direct political results are, however, negligible and its organizations at present confined to several small "locals."

A great impetus was given to the political movement in Canada by the formation of the British Labour Party. After the war, labour men in many sections of the country came to feel that they must have their own representatives in the various public bodies and to this end must build up a political organization. In most of the provinces of Canada there sprang up labour parties modelled more or less after the British Labour Party and adopting or adapting the platform laid down in the famous Draft Programme presented to that organization.

At this time when all sorts of reconstruction schemes were in the air, when the Russian Revolution had challenged the capitalist régime, many considered that the time might not be far distant when the economic system in all countries would break down. With some this led to a sort of fatalism or to the minimizing of the value of Parliamentary action and the insistence on some form of "direct action." With others, it greatly stimulated the interest in public affairs and led to a greater zeal in extending the political organization of labour.

Developments in the industrial field continually produced direct reactions in political parties, ideals and tactics. There had long been resentment in the Canadian movement against the pre-

pondering influence of the American officials. Moreover, there was a move toward a more efficient form of organization than that of craft unionism. These tendencies found expression in a movement originating in the West for the formation of a new type of organization known as the One Big Union. This organization formed just after the Winnipeg general strike of 1919, precipitated a bitter factional dispute in which the American Federation of Labour was largely victorious. Later a new organization formed in the United States and known as the Trades Union Educational League adopted new tactics to bring about a reorganization of the American labour movement. Instead of promoting a Secessionist organization they adopted the slogan "A United Front" and urged the tactics of "boring from within." This movement is frankly revolutionary in character, taking a great deal of its inspiration from Moscow.

Up to the present there can hardly be said to be a Canadian Labour Party. The political organizations in the various provinces and in many cases in the different cities, have sprung up independently and each drafted its own programme.

ATTEMPTS AT UNIFICATION

Two efforts toward unification have been made. In 1921, at the time of meeting of the Trades and Labour Congress in Winnipeg, there was organized a "Canadian Labour Party" but, although a meeting of representatives was held the following year at the Montreal Congress, the organization is largely on paper. Owing to the great distances and the dual or multiple industrial organizations, various labor parties have refused to affiliate.

Another attempt at unification is being made by what is known as the Workers' Party of Canada. This or-

ganization, promoted largely by those who have come out of the school represented by the Socialist Party of Canada, are working along the lines of the Trades Union Educational League. They condemn the Secessionist movement in the industrial field, yet have organized a new political party and insist that other organizations must come in on their terms. The net result to date has been considerable confusion.

REAL LABOUR MOVEMENT SLOWLY EMERGING

Yet out of all the confusion there is emerging a real labour movement. In nearly all the provinces labour is becoming active in municipal affairs and has elected representatives to the provincial legislatures as follows: Nova Scotia, 4; Quebec, 2; Ontario, 11; Manitoba, 6; Alberta, 4; and British Columbia, 3. At the last Federal Elections, Center Winnipeg and East Calgary elected labour candidates, and in a number of constituencies the former candidates owe their election to the support of organized labour. With a distinct though small group in the House of Commons, it may reasonably be anticipated that the political growth will be much more rapid than in the past.

The platform adopted by the convention of the Canadian Labour Party at Winnipeg may be considered fairly representative of the attitude of labour to the larger problems of the day.

Preamble: We have in view a complete change in our present economic and social system. In this we recognize our solidarity with the workers the world over. As a means to this end and in order to meet the present pressing needs, we recommend the following platform:

1. Unemployment — State Insurance against Unemployment, chargeable to Industry.

2. Public Ownership and Democratic Control of Public Utilities.

3. Electoral Reform-Proportional Representation. Names instead of Election Deposit. Extension of Voting Facilities.

4. Old Age Pensions and Health Disability Insurance.

5. Abolition of Non-elective Legislative Bodies.

6. International Disarmament.

7. Direct Legislation—Initiative, Referendum, Recall.

8. Enactment of Recommendations of

Washington Labour Conference, especially the eight-hour day.

9. Repeal of Amendment to Immigration Act providing for Deportation of British Subjects.

10. Removal of Taxation on the Necessities of Life, Taxation of Land Values, and Abolition of Fiscal Legislation that Leads to Class Privileges.

11. Nationalization of the Banking System.

12. Capital Levy for Reduction of War Debt.

Select Bibliography of Social and Economic Conditions in Canada

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THE aim of this bibliography is to provide a convenient and selected list of references which in their turn will serve to widen the authorities. Most of the Departments of the Federal Government at Ottawa have mailing lists and are glad to enter names on them for their publications. It is thus possible for research students to keep their material from these official sources up to date.

GENERAL

- Atlas of Canada* (1915: Dominion Bureau of Statistics. A new edition is in preparation incorporating the results of the 1921 Census).
- Canada: Acts of Parliament and of the Provincial Legislatures, Debates and Sessional Papers.*
- Canada Year Book* (annually: Dominion Bureau of Statistics).
- Canadian Institute (Toronto), *Transactions.*
- Kennedy, W. P. M., *The Constitution of Canada: Its Development and Law* (1923).
- Review of Historical Publications Relating to Canada* (1896-1918. The new series under the title *The Canadian Historical Review* is in progress, quarterly. These publications contain authoritative reviews of the economic literature and are well indexed).
- Royal Society of Canada. *Transactions.*
- Shortt and Doughty (Ed.), *Canada and Its Provinces* (23 Vols: 1914. Well indexed with a good bibliography).
- Supreme Court Reports of Canada and of the Provinces.
- The Canadian Annual Review* (Toronto: yearly).
- Dominions Royal Commission, *Fifth Interim Report, relating to Canada* (Cd., 8457).

- Final Report on the Natural Resources, Trade and Legislation* (Cd, 8462).
- Minutes of Evidence (Canada)* (Cd., 7971, 8458, 8459).

I. POPULATION

- Dominion Bureau of Statistics and Census, *Reports.*
- Dominion Department of Immigration and Colonization, *Reports.*
- Dominion Department of Indian Affairs, *Reports.*
- Dominion House of Commons, *Debates on Oriental Immigration* (Sessions 1912-13, 1922).
- Immigration Commission of U. S. A., *Reports.*
- Survey of Land Ownerships by Orientals in British Columbia* (British Columbia: Department of Agriculture, 1920).
- Treaty Agreement between United Kingdom and Japan* (Treaty Series: 1911, No. 18).
- Vital Statistics of the Provinces.*
- Votes and Proceedings in the Assembly of British Columbia* (Session 1922, Nos. 15, 34, 35).
- Adams, F. H., *The Administration of Indian Affairs in Canada* (1915).
- Anderson, J. T. M., *The Education of the New Canadian* (1918).
- Canadian Reconstruction Association, Toronto, *Suggestions for Land Settlement* (1921).
- Caron, I., "La Colonisation du Canada" (in *L'Annuaire Statistique de Quebec*).
- "La Colonisation de la Province de Quebec" (*Le Canada Français*, vol. iii, no. 5).
- Consulate-General of Japan, Ottawa, *Facts about Japanese in Canada* (1922).
- Lortie, S. A., *L'origine et le parler des canadiens-français* (1903).
- Origine des premiers colons canadiens-français* (1915).

Mills, H. A., *The Japanese Problem in the United States* (1915).

Oliver, E. H., *The Country School in non-English-speaking Communities in Saskatchewan* (1915).

Pelletier, G., "Le Partage de l'immigration canadienne depuis 1900" (*Transactions of the Royal Society of Canada*, 3d ser., vol. xii, sec. i).

Sato, K., and Iyenaga, T., *Japan and the California Problem* (1912).

Smith, W. G., *A Study in Canadian Immigration* (1920. A pioneer general survey. Statistics insecure).

Woodsworth, J. S., *Strangers within our Gates* (1909).

II. RESOURCES

Commission on Conservation, Ottawa, *Reports* (annual); *Bulletins on Fisheries, Forests, Water-powers*.

Dominion Bureau of Statistics, *Monthly Bulletin of Agricultural Statistics*.

Dominion Department of Agriculture, *Agricultural Gazette; Bulletins; Reports*.

Dominion Department of Interior (Forestry, Irrigation and Water-power), *Bulletins; Natural Resources* (monthly).

Dominion Department of Mines (Geological Survey and Mines Branch), *Reports*.

Dominion Department of Marine and Fisheries, *Fisheries' Reports*.

Provincial Departments of Agriculture, of Crown lands, of Mines, *Reports*.

Preliminary Report on Cobalt Mining Camp (Ontario Department of Mines, 1922).

Progress Report of the Agricultural Survey Committee of Manitoba.

Report of the Royal Commission of Inquiry into Conditions in Southern and Central Western Saskatchewan.

Report of the Survey Board of Southern Alberta.

Report of the Ontario Nickel Commission of 1917.

Canadian Institute of Mining and Metallurgy, *Transactions*.

Canadian Pacific Railway (Department of Colonisation and Development), *Agricultural and Industrial Progress in Canada* (Montreal: monthly; in progress).

International Geological Congress (1913), *The Coal Resources of the World*.

Adams, F. D., "The Need of Industrial Research in Canada" (*Bulletins of the Honorary Advisory Council for Scientific and Industrial Research*, no. 1).

"The Honorary Advisory Council for Scientific and Industrial Research and Its Work" (*Ibid.*, no. 9).

Biggar, E. B., *Hydro-Electric Development in Ontario* (1920).

Buller, A. H. R., *Essays on Wheat* (1919).

Ferrier, W. F., and Ferrier, D. J., *Annotated Catalogue of and Guide to the Publications of the Geological Survey of Canada, 1845-1917* (1920).

Fields, J. C., "Science and Industry" (*Bulletins of Advisory Council*, no. 5).

Ruttan, R. F., "A Plan for the Development of Industrial Research in Canada" (*Ibid.*, no. 10).

III. EDUCATION

Dominion Bureau of Statistics, *Historical Statistical Survey of Education in Canada* (1921).

Report of the Conference on Education Statistics (1920).

Report on Education Statistics (1921).

Dominion Department of Labour, *Annual Reports of the Director of Technical Education*.

Report of the Conference on Technical Education (1920).

Report of the Royal Commission on Industrial Training and Technical Education (4 vols. 1913).

Provincial Departments of Education, *Annual Reports, Manuals, Regulations*.

Report of the Massey Foundation on the Secondary Schools and Colleges of the Methodist Church in Canada (1921).

Universities' Bureau of the British Empire, *Year Book*.

Universities of Canada, *The Presidents' Annual Reports*.

Foght, H. W., *Survey of Education in the Province of Saskatchewan*.

Montgomery, W. A., *Educational Development in the Dominion of Canada* (U. S. A. Bureau of Education, *Bulletins* 1919, no. 89).

Parmelee, G. W., and Sutherland, J. C., *Education in the Province of Quebec* (1918).

- Sandiford, P. (Ed.), *Comparative Education* (1918: Chap. V, by the editor, deals with education in Canada).
 Seath, J., *Education for Industrial Purposes*.

IV. TRANSPORTATION

- Dominion Board of Railway Commissioners, *Reports*.
 Dominion Department of Railways and Canals, *Reports*.
Grand Trunk Arbitration: The Award, and Reasons for Award (1921).
 Interstate Commerce Commission, *Reports*.
Report of the Railway Commission (1917).
 Biggar, E. B., *The Canadian Railway Problem* (1917).
Canada Railway and Marine World (Toronto: in progress).
 Flavell, Sir J., "A Plan Aimed to Solve the Railway Tangle" (Toronto: *The Globe*, August 25, 1921).
 Innis, H. A., *History of the Canadian Pacific Railway* (1923).
 Jackman, W. T., Articles in *The Monetary Times* (Toronto), April 27, May 4, 11, 1917, May 2, December 19, 26, 1919, August 12, September 16, September 23, October 13, 1921; in *The Traffic World* (Chicago), June 29, July 6, 1918; in *The Monetary Times Annual* (Toronto) 1919-20-22-23; in *The Queen's Quarterly* (Kingston), January, 1922; in *The Railway Age* (New York), March 11, 18, 1922.
 MacGibbon, D. A., *Railway Rates and the Canadian Railway Commission* (1917).
 Moore, W. H., *The Irresponsible Five: A New Family Compact* (1917).
Railway Nationalization and the Farmer (1917).
Railway Naturalization and the Average Citizen (1918).
 Payne, L. J., Articles in *The Railway Age* (New York), June 20, 1919, January 2, 1920, January 7, March 25, April 8, 15, July 16, August 13, 1921, January 7, July 3, 1923.
 Shaughnessy, Lord, "Plan for Solving the Railway Problem" (Toronto: *The Globe*, April 25, 1921).
 Tye, W. F., *Canada's Railway Problem and Its Solution* (1917).

V. MONEY AND BANKING

- Dominion Bureau of Statistics, *Labour Gazette* (for prices and index numbers).
Reports on Wholesale Prices.
 Breckenridge, R. M., *The History of Banking in Canada* (1910).
 Johnson, J. F., *The Canadian Banking System* (1910).
 National Monetary Commission, *Interviews on Banking and Currency Systems of Canada* (1910).
 Ross, V., *History of the Canadian Bank of Commerce* (1922).
 Walker, Sir E., *A History of Banking in Canada* (1909).

VI. FOREIGN TRADE

- Dominion Bureau of Statistics, *Annual and Monthly Reports on the Trade of Canada*.
 Dominion Department of Trade and Commerce, *Canada as a Field for British Industries*.
Canada: Public Accounts (printed by Order of Parliament).
Return of the Chartered Banks of the Dominion of Canada (Ottawa: *Canada Gazette*).
The Monetary Times (Toronto: in progress).
The Dominion of Canada (1920, Bankers' Trust Company, New York).
 Coats, R. H., *Capital: Its Growth and Distribution, 1900-14*.
 Field, F. U., *Capital Investments in Canada* (1911).
 Grain Commission for Canada, *List of Licensed Elevators* (1922).
 Ingalls, W. R., *Wealth and Income of the American People*.
 Lake Shippers' Clearance Association, *Reports*.
 McFaull, R. J., "Regulation of Business in Canada" (*Political Science Quarterly*, June, 1922).

VII. PUBLIC FINANCE

- Dominion Department of Finance, *Reports*.
 Provincial Treasurers, *Reports*.
 Brittain, H. L., *The Taxation System of Vancouver* (Report to the Mayor and City Council of Vancouver, December, 1920).

- Canadian Manufacturers' Association, *Excise Tax* (1922).
- Canadian Reconstruction Association, Toronto, *Canada and Reciprocity with the United States* (1921).
- Clark, A. B., *Outline of Provincial and Municipal Taxation in British Columbia, Alberta and Saskatchewan* (1920).
- Donald, W. J. A., *The Canadian Iron and Steel Industry: A Study in the Economic History of a Protected Industry* (1915).
- Fleck, A., *Kanada: volkswirtschaftliche Grundlagen und weltwirtschaftliche Beziehungen* (1912).
- Grain Growers' Guide* (Winnipeg: in progress).
- Haig, R. M., *Reports of the Board of Taxation, Province of British Columbia* (1919).
- Taxation in the Urban Municipalities of Saskatchewan* (1917).
- The Exemption of Improvements from Taxation in Canada and the United States* (1917).
- Imperial Conferences, *Reports* (especially 1902, '07, 11).
- Industrial Canada* (Toronto: in progress).
- Keirstead, W. C., "Provincial Taxation in Canada" (*Journal of Political Economy*, February, 1923).
- "Succession Duties in Canadian Provinces" (*Ibid.*, April, 1922).
- Manitoba: Annual Report of the Assessment and Taxation Commission* (1919).
- Patton, H. S., "Reciprocity with Canada: the Canadian Viewpoint" (*Quarterly Journal of Economics*, August, 1921).
- Porritt, E., *Sixty Years of Protection in Canada* (1908).
- Shortt, A., *Imperial Preferential Trade from a Canadian Point of View* (1904).
- Stalker, A., *Taxation of Land Values in Western Canada* (1914).
- Stevenson, J. A., "Fiscal Politics in Canada" (*Edinburgh Review*, July, 1922).
- Villard, H. G., and Willoughby, W. W., *The Canadian Budgetary System* (1918).
- Vineberg, S., *Provincial and Local Taxation in Canada* (1912).
- White, Sir T., *The Story of Canada's War Finance* (1921).
- VIII. SOME SOCIAL EXPERIMENTS AND PROBLEMS
- British Columbia, Department of Agriculture, *The Agricultural Journal* (especially July-December, 1922).
- Dominion Department of Soldiers' Civil Reestablishment, *Canada's Work for Disabled Soldiers* (1920).
- Dominion Department of Labour, *Labour Gazette* (monthly statement of employment and unemployment); *Proceedings of the Eighth Annual Meeting of the International Association of Public Employment Services, September 20-22, 1920; Annual Reports; Report on Strikes and Lockouts in Canada, 1902-16.*
- United States: Bureau of Labour Statistics, *Proceedings of the Ninth Annual Meeting. . . Employment Services, September 7-9, 1921; Bulletins*, Nos. 74, 76, 86, 98 and 233.
- Report of the British Columbia Commission on Labour* (1914).
- Report of the Elevator Commission* (1910).
- Report of the Ontario Commission on Employment* (1916).
- Report of the Royal Commission on Industrial Relations* (Ottawa, 1919).
- Report to the British Board of Trade on Canadian Industrial Disputes Act* (by Sir George Askwith, 1913).
- Saskatchewan Commission of Coöperation and Markets, *Annual Reports*.
- Statutes of Canada, *Employment Offices Coördination Act* (1918).
- Adams, T., *Rural Planning and Development* (Ottawa, 1917).
- "Agrarian Movement in Canada" (*Quarterly Review*, January, 1921).
- "Canadian Government's Plan to Handle Unemployment" (*U. S. Monthly Labour Review*, February, 1919).
- Chicanot, E. L., "The Canadian Soldier on the Land" (*United Empire*, April, 1922).
- Clark, W. C., "The Country Elevator in the Canadian West" (*Queen's Quarterly*, vol. xxiii).
- Council for Social Service of the Church of England in Canada, *Bulletins*, Nos. 42, 43.
- "Divorce," *Canadian Law Times*, xxxvii, pp. 687 ff.; xl, pp. 337 ff. *Board v. Board* (1919), A. C. 956; *Walker v.*

- Walker (1919), A. C. 946; Kennedy, *The Constitution of Canada*, pp. 395 ff.
- Douglas, P. H., and Derry K., "The Minimum Wage in Canada" (*Journal of Political Economy*, April, 1922).
- Edwards, G. W., "The Employment Service of Canada" (*U. S. Monthly Labour Review*, August, 1919).
- Employment Service of Canada, *Bulletins*, August 1, 1921–November 1, 1922: (discontinued).
- Good, W. C., *Production and Taxation in Canada from the Farmers' Standpoint* (1919).
- "The Farmers' Movement in Canada" (*Dalhousie Review*, January, 1923).
- Irvine, W., *The Farmer in Politics* (1921).
- Jackson, G. E., "Unemployment in Eastern Canada" (*Economic Journal*, June, 1920).
- Lapointe, Mgr. E., "L'organisation syndicaliste catholique au Canada" (*L'Action Française*, février, 1922).
- Macklin, T., *Efficient Marketing for Agriculture*.
- McNeill, G. E., *The Labour Movement* (1887).
- Michell, H., *Profit-Sharing and Producers' Coöperation in Canada* (Queen's University: *Bulletins of History and Economics*, no. 26).
- "The Coöperative Store in Canada" (*Queen's Quarterly*, vol. xxiii).
- Moorhouse, H., *Deep Furrows*.
- Powell, G. H., *Coöperation in Agriculture*.
- Robertson, G. D., "Canada's Programme for Meeting Unemployment" (*American Labour Legislation Review*, March, 1921).
- Saskatchewan Coöperative Elevator Company, *The Coöperative News* (in progress).
- Selekman, "Nine Years of the Canadian Act" (*Survey*, March 31, 1917).
- Staples, M. H. (Ed.), *The Challenge of Agriculture: The Story of the United Farmers of Ontario* (1921).
- Stevenson, J. A., "The Agrarian Movement in Canada" (*Edinburgh Review*, July, 1920).
- Stewart, Bryce M., *The Unemployment Service of Canada* (Queen's University *Bulletins of History and Economics*, July, 1919).
- The Farmers' Platform* (ed. by the Canadian Council of Agriculture, Winnipeg, 1917.)
- Trade and Labour Congress of Canada, *Annual Reports*.
- Tremblay, G., "Le premier Congrès de la Confédération des travailleurs catholiques du Canada" (*L'Action Française*, septembre, 1922).
- "Unemployment in Canada" (*Survey*, May, 1922).
- United Grain Growers Ltd., *Annual Reports; The Grain Growers' Guide* (in progress); *Farmers in Business for Ten Successful Years, 1906–16*.

A Plan for State Labor Statistics

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ALTHOUGH statistics have been collected by public authorities in this country for many years, it still seems necessary, under some circumstances, to make a case for them. Public legislative bodies are willing to appropriate money for legislation and administration but not for statistics. It is already clear, however, that the need for extensive and reliable statistics in the many fields of public activity is almost as completely established as is the need for legislation and administration. In the absence of regular and reliable information the public in the typical complex American community must fall back for its judgments on hunches and imagination. It is only when information is currently fed to members of the community that they can become informed on such matters as the state of employment, the prevailing standards of living, hours of work, hazards of industry and similar questions.

NEED FOR PUBLIC REPORTS

Just as the individual business man is kept informed of the state of his business by an examination of his balance sheet, by reports on cost accounting, so the general public must look for its information on the state of the community in the reports, statistical and non-statistical, of its public agencies. It is useless to turn to voters as the source of programs of sound public policy, unless they are supplied with accurate materials on the basis of which such policy can be discovered and provided. That public information meets needs of this kind is all the time attested by the avidity with which

the facts from public reports are seized upon by agencies of public information and by members of the public itself.

The utility of public reports are not, however, limited to the function of providing public education. They have a more specific and immediate purpose. Those citizens of an American commonwealth who urge the enactment of child labor legislation, of workmen's compensation laws, of safety acts, and of restrictions on the work of women are usually not content to stop with the enactment of legislation. Whenever they have the interests of the community at heart they desire to know how effective this legislation is; what obstacles in administration it encounters; how efficiently their public servants are administering the laws; and what measures are being taken to sharpen and improve administration. On matters of this kind they cannot rely upon general statements from administrative officers. They must insist upon seeing the accounts. The taxpayer calls periodically for a statement of revenue and expenditures and receives it from his public servants. In the same way men and women citizens call for an accounting from the administrators of child labor laws, compensation laws and the like so that they may also estimate the work of their representatives.

Even if public information and report had no other use but this, substantial expenditures for its collection and distribution would be entirely justified. But it fortunately happens in the course of administration that executive officers themselves require for the efficiency of their own administration

the same or similar types of data. The chief of an inspection bureau, who has under his direction a hundred or more factory inspectors, cannot rely on a perusal of occasional reports of his subordinates for an estimate of the quality of the work of his department. He must make his general survey; must compare the work of his own bureau with that of similar bureaus in other states; must contrast the reports from one section of the commonwealth with those from another; must, in short, have that statistical equivalent of a balance sheet and of a system of cost accounting which the individual manufacturer finds so indispensable in the operation of his own business enterprise.

PROBLEMS OF DUPLICATION

This dependence of public administration on periodic information creates in a country like the United States real and increasingly difficult problems. Probably in no country of the world has there been so rapid a growth of state activities as here. The division of responsibility between state and federal governments has created problems which make the collection of information even more difficult. There is complaint on all sides of the duplication of statistical effort. Manufacturers and business men are annoyed at the great volume of questionnaires and forms which they are asked to fill out.

In a great many cases, federal and state agencies are in pursuit of precisely the same information. The Commonwealth Employment Bureau is interested in the state of employment. The Federal Reserve Board, a federal agency, because of its concern about business conditions, also wants to know about the state of employment. Likewise the United States Bureau of Labor Statistics, which is

charged with the function of supplying general information on the state of labor to the whole country, has the same interest. Unless account is taken of this overlapping and provision is made for a proper division of labor, the result is duplication, frequently confusion, and always irritation. No matter who collects the necessary information, and no matter how many agencies repeat each other's efforts, the cost is ultimately borne by the taxpayer. Under the circumstances it is clearly the wisest procedure to adopt that system which yields the most satisfactory data at the smallest possible expense.

RESULTS AVAILABLE FOR FEDERAL AGENCIES

Experience with conditions such as these in this country has brought students of the problem to the conclusion that it is most economical and most satisfactory to have state agencies extend the field of their statistical inquiries and to make the results of their survey available for federal agencies. Already in states like New York, Massachusetts, Wisconsin and Ohio, the state authorities continue with the collection of statistics, add to them when necessary, subscribe to the forms and methods agreeable to the federal agencies, and then make their material available for the latter. In this way existing agencies merely extend the scope of their activities and permit federal administrative organizations to act as clearing houses for information collected within the extensive geographical area of the United States.

NEED FOR LABOR STATISTICS

What has been said concerning the field of general public statistics is of course wholly applicable to that of labor statistics. Here if anything the need for reliable and continuous mate-

rial is greater than elsewhere. The issues on which public interest centers are difficult of settlement. They are the source of deep and lasting hostilities and they frequently involve the community in violent and costly trials. Nowhere, more than here, would it seem more desirable to bend every effort to raise the plane of discussion, to make opinion rest on fact, and to assure the various elements in the community that their legislative mandates are being faithfully and competently administered.

The degree in which a body of extensively disseminated facts would serve public purposes can be best understood by a detailed examination of the functions which are entrusted, for example, to such an agency as the Pennsylvania Department of Labor and Industry. To this department in general is assigned the administration of a great body of labor laws now and in the past enacted by the legislatures of the state. Enumeration of the subordinate bureaus of this department shows how completely these laws touch every phase of labor activity and of the labor problem in a great industrial state. The officers of these bureaus are charged with establishing and protecting the standards of woman and child labor; with inspecting the safety of work in factories and mines and with the formulation of safety codes and standards; with observing the course of industrial employment in the state and with making it easier for unemployed to find jobs and for employers to fill vacancies; with the administration of accident insurance laws; with the rehabilitation of persons disabled in industry; and with limiting the field of industrial warfare.

It is, of course, clear that none of these agencies can perform their functions effectively without a foundation of extensive facts. These agencies

must first of all be acquainted with the important facts concerning their problem. Their administration must also yield the kind of information which will satisfy public curiosity and enable directors of bureaus to test the competence of their staff. To illustrate the variety of data which they need in their work, and which they collect while they are pursuing it, it is advantageous to discuss in some detail the functions of several of the more important bureaus of the Department of Labor and Industry in the state of Pennsylvania.

USEFULNESS ALONG INDUSTRIAL LINES

Regardless of what such agencies have done in the past, there can be little doubt but that a properly organized and well-qualified bureau of mediation and arbitration has few limits to its usefulness in a contemporary American industrial commonwealth. Those familiar with the nature and origin of industrial disputes are well aware of the fact that they frequently arise from small and trifling episodes and irritations which if they were discovered early enough would rarely emerge in the form of battles. The difficulty is that the flame is ignited, the fire is allowed to smoulder for months and even years and then to every one's surprise, breaks out in a general conflagration.

A well-qualified state bureau of mediation and arbitration would so organize itself as to have at its disposal the information which would permit it to perform its own function more efficiently and to enlist public opinion when the occasion demanded it. Advanced industrial states in this country already collect data about industrial conditions which are indispensable to effective mediation and conciliation. It requires only a slight survey of the nature of industrial disputes to discover the kind of data on

which arbitration agencies must depend.

KIND OF DATA

First. Since a conciliation bureau is concerned with the settlement of disputes, one of its earliest duties is the creating of an organization equipped to report actual and impending industrial disturbances. It must itself know where and how industrial disputes take place and it is the better part of wisdom to take the public into its confidence. From the angle of historical analysis, no body of data has served a more useful purpose than the statistics of strikes and lockouts collected from 1880 to 1905 by the U. S. Bureau of Labor and published in those great volumes on strikes and lockouts in the United States. In these documents it was possible to trace the changes in the number of industrial disturbances, their magnitude, the interesting variations in the causes of industrial strife, the relation of union to non-union strikes, their duration, their direct and indirect effects, and the manner of their settlement. It would be hard for a prospective mediator to find a better elementary text on the nature of his problem than is furnished by the material in the reports of the Federal Bureau of Labor. A record of the same kind for a state like Pennsylvania cannot fail to serve the ends of industrial peace both by furnishing conciliators with the materials for their job and by acquainting the public with the extent and gravity of the problem.

Second. Disputes in industry arise because of issues between employers and employee which they find they cannot settle amicably. Of such issues the adjustment of wages has proved by experience one of the most troublesome. If the dispute is to be adjusted fairly and swiftly, either by the direct intervention of the public mediator or

by the force of public opinion, there must always be quickly available the data which lead to a sound judgment on the merits of the dispute. Many of the differences over wages occur in organized trades and industries. The organizations of workingmen in these places keep full records of their basic wage scales and of their differentials. Already the state of Pennsylvania collects such material for the use of the U. S. Bureau of Labor Statistics. All of what the Federal Bureau gets and much more that remains in the files could be easily published in a form available for public scrutiny and for the more effective use of the Bureau of Mediation and Arbitration. If that were done, all interested in the controversy could make comparisons between union rates in peaceful industries and in industries where a strike is on; or between union rates and wages in a non-union, strike-bound industry; or between union rates in Pennsylvania and Massachusetts; or between the rates within the state itself in such cities as Philadelphia and Pittsburgh, York and Scranton.

Once disputed issues become reduced to comparative terms, they become the more easily the subject of reasonable adjustment. Where, moreover, industries operate outside the jurisdiction of trade unions and are manned largely by unskilled and semi-skilled workers, it is possible to supplement statistics of union rates of wages with data such as the rate of wages of common labor. Directors of state bureaus of labor statistics and private statisticians who have worked on the problem testify to the utility of a measure of fluctuations in the rate of wages of common labor. It requires only the original definitions and the contacts to make available for any large industrial state material of this kind.

We have for almost a decade lived in

a period of marked fluctuations in prices. Wage changes do not alone tell the story of the upward and downward movements in workingmen's standards of living. Whatever wage statistics are used must constantly be corrected to allow for the variations in the purchasing power of a money income. In some places inquiries currently conducted by the Federal Bureau of Labor Statistics have made available the data on the movement in costs of living and in the retail prices of important articles of home consumption.¹ Where such inquiry has not been made, it is incumbent on the state agency to make modest but adequate investigations into the matter and to report its findings currently to the public. What has just been said about wages and the cost of living applies with equal force to statistics on the hours of labor; and statistics on standard hours of labor are even easier to collect than those of wages and the cost of living.

Third. It is commonly supposed that employers and employees, whether organized or not, are constantly engaged in battle. We are moved by the spectacular and forget the millions who are working peacefully and the long intervals between great industrial battles. The fact is, of course, that in a very large number of cases, representatives of the men and of the employers are constantly concerned with the task of creating the machinery of peaceful and reasonable adjustment. More often than is imagined these efforts are crowned with success, if only temporary, and a substantial proportion of the industrial wage earners of the country work under the terms of agreements satisfactory to both parties. These agreements represent industrial

codes. They fix the conditions of work in the shop; methods of wage payments; the manner of discharge; and a mass of detailed working rules. Each term of such an agreement constitutes, for the time being, an adjusted dispute.

CODES OF EDUCATIONAL VALUE

Obviously such codes or agreements must be of tremendous educational value. A study of them should teach people, who are ignorant of the matter, how some employers and their help have learned to live amicably with one another. They should throw light on the reasonableness of employers' or employees' demands. To practised conciliators they should indicate the points of friction and the methods whereby such friction has in some industries been removed. If successful experience in the reduction of the area of industrial warfare is to have its influence on new and future disputes, surely the records of this experience should be available for general education and for the immediate use of the mediator. Not only should the Bureau of Mediation and Arbitration be the repository for the records of successful experiments with peaceful adjustments, but carefully chosen accounts of these records should be put into the hands of the people of the state.

In much the same way the work of the mediators themselves reveals the possibilities for adjustment that should become public property as quickly as is possible. It happens frequently in the course of a year that the Bureau of Mediation and Arbitration has settled one or two very stubborn disputes; it has made investigations which indicate the type of difficulty that makes for friction; or it has employed a variant of an old principle of mediation which deserves advertisement. As in the reports of the Massachusetts Bureau of Mediation, such materials should be brought

¹ The U. S. Bureau of Labor Statistics publishes figures on cost of living in Philadelphia, Pittsburgh, and Scranton.

together, carefully edited, and distributed. They will soon come to be generally read and even to be asked for.

NEED FOR EXTENSIVE STATISTICAL REPORTING

The work of an inspection division, to cite a second bureau of the Pennsylvania Department of Labor and Industry, reveals again the need for extensive statistical reporting. In this case, the numerical material must come largely from the administrative activities of the bureau itself and not from general industrial facts, as in the case of the Bureau of Mediation and Arbitration. The ends of statistical collection are served when the director of the inspection service acquires detailed and comprehensive information on the operation of his bureau and when the citizens of the state learn about the effects of their laws. Not that a statistical exhibit is an adequate substitute for direct and personal supervision over the members of a staff of inspectors; but that it is a useful and often an effective check on personal observation.

How far well-planned statistical tabulations lead to significant information on the nature and effect of inspection laws is illustrated in the material contained in a recent report by the New York Department of Labor on statistics of factory, homework and mercantile inspection² and on mines and quarries, industrial diseases, and employment certificates. The report covers some 50 pages and presents in admirable statistical form the results of one year's experience with the various types of inspection.

SIGNIFICANT INFORMATION OF TABLES

The tables, to mention only a few of the items, show the number of factory

inspections, classified by nature of work done, the number of visits and the number of calls; the number of compliances with orders, classified by the nature of the infraction into administration, sanitation, accident prevention, fire protection, children (prohibited occupations), women and minors, day of rest, and payment of wages, and then further subclassified into 32 groups; prosecutions, similarly classified by nature of infraction as well as by the results of the prosecution. Another series of tables deals with violations of laws protecting children. They show the number of children found illegally employed in factories; those found at prohibited employment; the number between the ages of 14 and 16 found employed in factories; and the number working illegal hours. As was said before, these interesting statistical exhibits are not necessarily a proof of the adequate enforcement of the law, but they represent the types of information which those charged with law enforcement should furnish periodically to the people of their state.

With the exception of the statistical reports on Workmen's Compensation and on the trend of employment, the materials from the other bureaus do not differ sufficiently from those of the Bureau of Inspection to make necessary a separate discussion of their problems. What problems they have are common to all of the divisions of the Department of Labor and Industry and can be most profitably discussed with regard to the larger problem of the organization of statistics in the department.³

² An additional word on statistics of employment may still, however, be useful. In all of the great waves of unemployment in this country, analysis of the problem of idleness has been hindered by the lack of reliable statistics of employment and unemployment. Estimates before the President's Unemployment Conference varied from one another by several millions.

³ Annual Report of the Industrial Commission of the State of New York, year ending June 30, 1920, p. 54 ff.

THE ORGANIZATION OF LABOR STATISTICS AND INFORMATION

Enough has been said to show how essential the extensive collection and publication of statistical material is. Without it the community is ill-informed or not at all, has no check on the performance of its public servants, and the administrators themselves may well perform their functions in the dark. The real problem, then, consists in the establishment of the proper statistical machinery. Fortunately, for this purpose the Pennsylvania Department of Labor and Industry seems to possess sufficient legal authority to permit the collection and publication of a wide range of statistical data. There remains, consequently, the question of organization.

All experience with such a task dictates the necessity of entrusting it to a trained and expert statistician, supported by an adequate statistical staff and the necessary equipment. In a large department like that of Pennsylvania, the duties of the statistician and his staff are unavoidably twofold. He must first collect statistics independently and he must, second, receive some of his statistical materials from the several subordinate bureaus of the department. He functions, therefore,

The realization of the utter dependence of solution of the problem on adequate measures of unemployment led to an inquiry into the methods for improving and extending our statistical measures in this field. The first fruits of this inquiry were a reiteration of the facts long known, that the reports of employment exchanges do not and cannot furnish acceptable indexes of the course of employment and that personal observation brings conclusions of an even more questionable nature. In the judgment of trained statisticians who have just completed a study of the question, the recommendations made by the committee on the statistics of employment and unemployment will yield that minimum of information, essential to a knowledge of the true course of industrial employment.

both as an original collector of statistics and as the supervisor over statistics not originally collected by himself and his own immediate staff. Where the statistical materials of a constituent bureau are simple and not voluminous, that bureau needs no separate statistician. A competent clerk under the direction of the department's statistician, can draw up the proper forms for collecting information, prepare the desirable tabulations, and then submit from time to time the statistical data to the department's statistician.

With such a division as the Bureau of Compensation, however, whose administrative functions are so directly dependent on accurate and complete actuarial and statistical data and whose burden in this respect is so heavy, a full-time statistician or actuary is required for that bureau alone. But here, too, it is desirable that the department's statistician confer with the statistician of the bureau on matters of form and tabulation and that there be made available for him such materials as he may wish to use for the general purposes of the department.

Because the Department of Labor and Industry should collect certain types of information not already collected by its constituent bureaus and because some supervision must be exercised over the statistical output of the bureaus, it is by all odds the best plan to associate the statistician and his staff with the executive authority in the department. In this way the statistical officer furnishes the executive authority with the information it needs and controls at the same time the statistical product of the divisions. A plan of this character is in effect in the states of Massachusetts and New York and has there worked admirably. It is on somewhat the same principles, too, that the recent reorganization of Dominion statistics in Canada, which has

already produced such notable results, rests.

GENERAL FUNCTIONS

So organized, the functions of this central statistical office are reasonably clear. It collects and publishes information which does not obviously fall within the jurisdiction of a constituent bureau. It exercises control and supervision over statistics collected by such bureaus and receives their statistical product. Where authorized by the executive authority in the department, it plans and conducts special statistical investigations into matters, again not within the province of a subordinate bureau. And it assumes responsibility for the publications of the department.

The effects of this form of organization are in the main very satisfactory. Under it the gathering of statistics and their use are centrally planned. The matter is not left to chance or to the whim of a bureau clerk. Responsibility for the form and content of the final statistical reports is on the general statistician of the board. Reports thus acquire a uniformity and comparability which they do not otherwise possess. It becomes possible, if the general statistician is a competent person, to plan a continuous series of statistical and non-statistical publications which it would be difficult to achieve under a more decentralized form of organization.

THE BUDGET

I refrain from making any estimates of the budgetary requirements of such a statistical service. It could be no more than a guess. Much more detailed information than I now have is necessary before the estimate can be fairly made. Much turns in such an estimate on the present state of statistical equipment of the department; on the qualifications of the present clerical

force; on the degree to which field agents of the existing bureaus can be employed in prosecuting statistical inquiries; on the use to which the available funds for printing are now being put and on other matters of the same nature. It is, however, desirable to make two general observations that bear directly on the size and nature of the budget for a central statistical service. Trained and qualified statisticians have a high market value. The chief statistician in a department of labor and industry must possess a combination of qualities not easy to find. He must combine expertness in statistical method with executive ability and experience. Such qualities bring substantial salaries.

The second observation concerns the nature of the budget. Experienced public statisticians testify unani- mously that highly segregated budgetary provisions spell practical failure in administration. They find from practical experience that a lump sum appropriation allows that elasticity within the organization which is essential because it is as a practical matter difficult to foresee the burdens that will be imposed on the various members of the staff. While there is some difference of opinion on this point, the majority also hold that segregation into salaries and contingent expenses is also unwise. The existence of a contingent fund, it is observed, puts a premium on appointments even when there is at the time no need for additions to the staff.

PUBLICATIONS

It, of course, stands to reason that all of the information accumulated by a large government department cannot, because of practical considerations, be published. That department has, however, not discharged its obligations which does not currently issue a well-

chosen minimum of reports and publications. The conduct of special investigations and of a regular administrative procedure that yields facts which are not promptly exposed to public scrutiny cannot be called successful public administration. Even for the use of administrative officers themselves, it is indubitably true that material lying unanalyzed in files is not nearly so useful as similar data which have been analyzed and interpreted in preparation for their publication. It is in the interest of sound administration that a state department of labor and industry have a thoughtful program of publication and that it exert every possible effort to adhere to it.

The publications and reports of such a department divide themselves into several groups in which it is rarely possible, or even desirable, to separate the statistical from the non-statistical elements. There is, first, the group of current, short reports, usually monthly, containing material that bears on the state of labor at the time of its publication. First-rate examples of this type of publication are the monthly bulletins of the *New York Industrial Commissioner*, formerly known as the *Labor Market Bulletin*, and the *Massachusetts Industrial Review*, published quarterly. The New York bulletin contains, among other things, indexes of the course of wages and employment in the state. This material alone is of such importance that it has contributed to a country-wide recognition of the work of the statistical division of the New York Industrial Commission. The Massachusetts bulletin has a more varied content. In the issue of June, 1921, which is typical, there is a general summary of industrial conditions in the state; excellent statistical reports on the number and membership of labor organizations in Massachusetts from 1911 to 1920 and on employment

in Massachusetts for the quarter ending March 31, 1921; and a report of the State Board of Conciliation on the Boston Building Trades controversy. In form and in content both of these reports attain a high standard of excellence.

Monthly Bulletins

As the result of a survey of the experience of several states with current statistics of labor and of the requirements for such information, the conclusion is reached that a monthly bulletin covering the following items would fill the immediate needs of a progressive department of labor and industry:

1. Numbers of persons on the payroll of factories, one week in each month, classified into detailed industrial divisions.
2. Total wages paid for the same week, similarly classified.
3. Rate of pay for common labor, shown preferably by geographical district and by industry.
4. Changes in the rates of wages reported during the month.
5. Cost of living and retail food prices either taken from the report of the U. S. Bureau of Labor Statistics or collected independently where such reports are not available.
6. The volume of building, as an index of business conditions.
7. Reports of bureaus in the department only when the quick publication is necessary and when the data have been subjected to adequate analysis.

Quarterly and Annual Reports

The next group of periodic reports are those which should appear quarterly and annually. Where a comprehensive monthly report is issued, the need for quarterly reports is not so urgent. Largely for brief reports of bureaus and for such matter as the degree of unemployment among organ-

ized workers is the quarterly report particularly useful. More important by far, however, is a program for annual publications of the department. These by their very nature will combine statistical with other material and as a minimum include the following:

1. Report of the department and all of its constituent bureaus. This should be a carefully prepared document. While it should not repeat material already published in the monthly or quarterly bulletins, it should contain a comprehensive and systematic account of the activities of divisions of the department. It is highly desirable, not only on the score of convenience, but also because such a practice will teach responsible bureau officers to avoid delay, that the annual report appear in a single volume at an early date after the close of the year (calendar or fiscal, depending on practice). The issue of bureau reports as separates, scattered over a year, makes their use inconvenient and encourages delay in their preparation.

2. Annotated edition of laws and court decisions pertaining to labor.

3. Trade union rates of wages and hours of labor.

Special Periodic Reports

The third group includes periodic reports appearing at longer intervals and the results of special investigations. The Industrial Directory of Pennsylvania, now published by the Department of Internal Affairs, is a report of the first kind. It should be continued. In its last section it lists trade unions in the state and gives the membership of the national organizations with which these unions are affiliated. Since this material is available elsewhere, it would be more useful to give only the membership of the unions in Pennsylvania, a type of information much more difficult to get elsewhere. Where spe-

cial investigations are the subject of general interest, reports on the investigation should be published. The Pennsylvania Department of Labor and Industry has made a number of investigations into what seem important and interesting matters, but the reports have not been issued.

General Reports

The fourth group includes current rulings of the board, formulations of new codes and standards, posters and the like, whose publication presents no special problems.

STANDARDS OF REPORTING

The usefulness of government publications is a function not only of the intrinsic merit of their content but also of the form and manner in which they are issued. Reports come into general circulation when they conform to standards which commend themselves to the critical intelligence of the community. Such standards are, of course, very great in number. But an examination of the experience of public departments with reports of one kind or another is indicative of the salient importance of qualities of the following kind:

1. *Timeliness*: Much of the current information which is issued by public agencies, has an almost immediate administrative use, either by private parties or by other public departments. Private employers use reports of trade union scales of wages and of hours as guides in making contracts with their own workers. The Federal Reserve Board employs statistics of employment and of wage movements in its forecasts of the trend of business and in determining its banking policy. Both business men and public agencies, charged with administrative duties, have complained of tardiness in the issuance of public documents. Reports

of the activities of state departments, likewise, influencing as they should contemplated legislative and executive policy, cannot appear too soon after the close of the administrative period. If a check on the efficiency of administration is to serve its purpose, it must be available early enough to permit its effective application.

2. *Clarity and Precision:* Public reports should be reliable; they should serve as the accredited and accepted sources of primary information on the subject; they should have the reputation of dealing honestly with facts, no matter how controversial their nature. A conviction that factual reports are biased is fatal to the success of such undertakings. The opportunities for departure from standards of this kind, are, unfortunately, many. I cull a few excerpts from current reports of state bureaus which represent reporting that is not clear and is probably inaccurate, too. "Total and involuntary unemployment" states one report, "reached its peak" on a certain date, approximating several hundred thousands of "totally and involuntarily unemployed persons as expressed in man-power and in working hours." The careful reader will pause at the terms "man-power" and "working hours" and ask what they mean. Another excerpt states that efforts were made to "ascertain the number of seasonal occupations and industries in various parts of the state. Methods were worked out whereby these seasonal industries and occupations became more regular and less periodical throughout the year." Here is an accomplishment of great significance. Many have wrestled with the problem of seasonal variations in employment for years. What are the methods whereby this agency has proceeded in its program of regularization and how successful have its efforts been? On these matters the report

sheds no further light. Similar examples of the same type of reporting can be easily added to these exhibits. Another form of ineptitude in reporting, which will be noted only by the meticulous but which anyhow tends to discourage confidence in the reports, is illustrated in such statements as that "45.498 per cent of accidents is due to carelessness and 30.225 per cent to non-preventable causes" or that ".889 per cent [apparently an error] of the applicants referred to jobs were accepted." A mere appearance of precision, where none actually exists, is on all counts to be avoided.

3. *Continuity:* The fields of public interest are always shifting and growing. This condition tempts reporting agencies to enlarge the scope of their reports by constantly including new materials. If such extension could be achieved without loss to the old material, no one could quarrel with it. But this is rarely the case. The addition of a new statistical series means usually the relinquishment of an old one. On this matter there is unanimity of opinion among students of statistical reports. Continuity is preferable to exhaustiveness. A continuous wage series running back to 1914 is much more useful than a discontinuous series of wage statistics, supplemented by a new report on building permits. Unless the need for new reporting is most urgent, the ends of good statistical reporting will be best served by the maintenance of modest but continuous series of data.

4. *Uniformity, convenience, completeness, and circulation:* Those accustomed to use state reports have little difficulty in finding and using the publications of states like New York and Massachusetts. The reports are issued in attractive and recognizable form. Variations from the form are made infrequently and when they are

made are slight. They have an identity and when used convey a feeling of familiarity. In physical construction they conform to high standards of conception and workmanship. Tables have been carefully planned, obviously with an eye toward clarity and exactness. The materials are not scrappy but are designed to present a fairly complete picture of the subject. All of these qualities combine to give a large circulation to the reports. People know where to find and how to use them. Moreover, there is available in both states complete lists of publications, indicating those out of print and those still available for circulation. Every state department, which has as one of its important functions the issue of reports, should publish at least annually a complete and clear list of its publications.

CONCLUSIONS

1. The collection of statistical and other material is a prime function of state administrative agencies. Collection and distribution of such mate-

rials enables the community and executive officers to follow intelligently the course of legislative and administrative policy and to measure the effectiveness of both.

2. The collection of labor statistics in a state department of labor and industry should be entrusted to an adequately staffed statistical division in charge of an expert statistician. This division should be assigned directly to the executive authority of the department.

3. The functions of the statistical division are the direct collection of statistical materials, the undertaking of special investigations, supervision and control over statistical work of subordinate bureaus, and the assumption of responsibility for the prompt publication of all current and special reports.

4. The department should make a comprehensive program of publications, conforming to the standards described in the last section. This program should be adhered to as closely as are the other functions of the department.

Book Department

Manchuria—Land of Opportunities. Pp. 113. New York—South Manchuria Railway, 1922. Compiled and Published by Thomas F. Logan, Inc., New York.

A most excellent and useful compilation of the statistics and facts to show the recent wonderful economic expansion of Manchuria under Japanese influence, which is, as the book truly suggests, a modern "Economic Miracle." The book contains over one hundred pages of information including many charts and statistical tables. In addition there are about fifty-eight pages of excellent pictures apparently selected with a view to emphasizing the up-to-date, modern character of the recent industrial expansion. About two-thirds of the discussion is devoted to a brief survey of the natural resources, climate, manufacturing and commercial development. The remainder of the book deals with the activities of the South Manchuria Railway.

The activities of this great company are surprising in their variety and extent. Its investments are stated as about two hundred and forty million dollars with an actual value of seven hundred million dollars. One-half of its financial obligations are held by the Japanese Government which, in addition, guarantees six per cent interest on the securities held by the public. It controls 686 miles of railroad in Manchuria and 1,153 miles in Chosen (Korea). It has constructed and is operating the most important harbor works, warehouses, coal mines, steel plants, public utilities, modern hotels, hospitals and schools in Manchuria. It maintains industrial research, mineral surveys and agricultural experiment stations. Its activities suggest almost an economic monopoly.

As might be expected, the book seems to have a certain amount of propaganda purpose. Emphasis is placed on the large amount of railroad and industrial equipment purchased from the United States. The great economic benefits resulting from Japanese development are stressed. But the facts presented make it rather difficult for us to accept the suggestion that the

South Manchuria Company is entirely of economic significance and not political in its aspects. Almost exclusive control of transportation and industrial concessions does not tend to keep the trade door open for other countries. The partial economic control of 170,000 Japanese residents over a population of 27 million Chinese suggests many of the factors in the Shantung Controversy. However, as the book states, it does not attempt to discuss the political situation.

For anyone interested in Manchuria the book is extremely valuable as it contains the essential facts about the development of the country which cannot be readily found elsewhere.

ALFRED G. WHITE.

ROSS, EDWARD ALSWORTH. *The Social Trend.* Pp. 235. Price, \$1.75. New York: The Century Company.

Fourteen essays, dealing with various aspects of contemporary American life, comprise this volume. Combined, they represent the "attempt of an observer at the masthead to judge the probable course of the ship, to call out what lies ahead and how the ship must bear to starboard or to port in order to avoid trouble."

The topics discussed cover a comprehensive range: immigration, birth control, folk depletion in rural America, status of women, social service, prohibition, war, freedom of speech, the legal profession, etc. On all of these, Professor Ross holds definite views, which he expresses in a way that leaves no doubt in the reader's mind of his attitude. The language is simple, frank, fearless, unequivocal.

Most of the essays included were published previously in a number of dissimilar magazines. Nevertheless—and this is indicative of the outstanding feature of the book as a whole—whether the author is talking to the learned fellows of his guild, the members of the American Sociological Society, or the readers of the *Delineator*, the style, its vigor, its popular appeal, yet its cold logic, is the same.

Professor Ross can "sell" sociology. He has been "selling" it successfully for years. There are those to whom this is to his discredit; to others, among whom the reviewer unblushingly takes his place, it is his peculiar value. One can open this book on any page and enjoy it; anyone can read it, profitably. Whether one agrees always or not, no matter on what subject he speaks, Professor Ross deserves a hearing; no matter to whom he speaks, his style will always obtain one. It is a racy, readable and stimulating volume.

JAMES H. S. BOSSARD.

CASSEL, GUSTAV. *Money and Foreign Exchange After 1914*. Pp. 287. Price, \$2.25. New York: The Macmillan Company, 1922.

The keynote of this volume is "stabilization." In the earlier chapters Professor Cassel convincingly demonstrates the relationship between inflation of currencies and rising prices throughout the world, during the war, carefully refuting the arguments of those who have contended that the large volume of money was issued because of a demand for it. Responsibility for a large part of the difficulty is placed squarely on the management of the various central banks. When capital was scarce and a large amount of saving highly important, they should have raised their discount rates, undertaking the task of accommodating the supply of money to the needs of the community in such a way that the general level of prices would not be altered. Instead, they followed the line of least resistance, keeping their rates low and thereby encouraging inflation.

With the view that pre-war prices are to be considered normal, and that attempts should be made through deflation or otherwise to bring prices back to that level, the author has no sympathy and little patience. Injustices would be done to a very large number of people for the sake of fancied justice to a few. Instead of deflation, stabilization should be attempted, one part of the plan being devaluation. Little harm results from either high or low prices, but a vast amount of it from fluctuating prices.

Throughout the volume strong emphasis

is placed by Professor Cassel upon the theory of "purchasing power parity" which he has for several years been urging. Like most theories, it cannot readily be stated in brief space without a sacrifice of clarity, but the general idea is that a depreciation of the currency of one country (say Germany) in terms of the money of another (say the United States) has in itself little effect on the commercial relations between the two, since internal prices are soon altered in such way as to prevent such an effect. Thus the temporary advantage to German exporters that comes through the depreciation of the mark in the United States is soon counteracted by the rise of prices in Germany, and the temporary advantage disappears. The significance of this in connection with such unwise legislation as the "American valuation plan," which was so widely discussed in connection with our tariff law, could be easily developed if space permitted.

Criticisms of Professor Cassel are most apt to be directed against the apparent rigidity of some of his theories, such as, for example, his presentation of the quantity theory of money. His views are, however, gaining wide acceptance. Moreover, he is one of the European economists whose services are most widely in demand, and whose reputation for ability and for constructive leadership is growing in this post-war period. His position is of course strengthened by the fact that his own country (Sweden) was a neutral during the war.

CUNNINGHAM, WILLIAM J. *American Railroads, Government Control and Reconstruction Policies*. Pp. 409. Price, \$3.00. Chicago: A. W. Shaw Company.

While the last decade does not show a record of material progress of American railroads which compares favorably with the record of former years, it has nevertheless been a singularly eventful period of American railroad history. The interest which the occurrences of this period have aroused is indicated by the remarkable amount of writing about the railroads which has been done in the last three years. Most of what has been published has ap-

peared in periodicals, newspapers, pamphlets and official reports, but there have also been several books added to the somewhat meager list of authentic and serviceable volumes dealing with American railway transportation.

This work of Professor Cunningham's is a satisfying addition to the list. It is primarily an account of our experience with government operation of railroads during the World War, though it includes also a concise account of the activities of the Railroads' War Board in 1917, and reviews briefly the events which have occurred since the passage of the Transportation Act and the restoration of the railroads to private control.

By virtue of his position on the staff of the Director General of Railroads, first as Manager of the Operating Statistics Section and then as Assistant Director of Operation, Professor Cunningham had an excellent opportunity to observe all phases of the experiment of Federal management of the railroads. His thorough knowledge of railroad transportation, gained in years of experience as a railroad official and as a student and teacher of railroad economics, has enabled him to estimate properly the significance of the factors which he has had to consider in making a study of his subject, and, what is more important, has permitted him to approach controversial topics with the impartial spirit of the scholar. As might be expected, his work is clear, logical and well-balanced, and his conclusions are sound and trustworthy.

He gives a careful analysis of the policies followed by the Railroad Administration in dealing with the many problems with which it was confronted. He has much praise for the achievements of the Administration, especially during the early months of government control, when by the unification of physical facilities, the disregard of competitive influences, and the elimination of unessential service, it was able to reestablish the railroad service and bring order out of the confused situation which the Railroads' War Board had not found it possible to cope with successfully. He justly condemns the failure of the Railroad Administration to run the railroads as a business

enterprise and sees no reasonable excuse for the refusal to make an increase in rates and fares commensurate with the increase in the expenses of operation. In his discussion of the labor policies of the Railroad Administration he has little fault to find with its wage increases as such, but he condemns the practice of wage standardization, the granting of the "national agreements," and the establishment of a system of settling disputes which impaired the morale of the workers.

While apparently not a believer in government ownership and operation of railroads as a permanent policy, Professor Cunningham is of the opinion that the experiment with Federal operation during the abnormal conditions of the war period does not offer a test upon which to base reasonable conclusions with respect to the wisdom of such a policy. It is interesting to note, in view of the frequent accusations that Mr. McAdoo used his position as Director General to further his political ambitions, that Professor Cunningham believes political considerations had little or nothing to do with the shaping of the program of the Railroad Administration.

One of the most interesting features of Professor Cunningham's book is his discussion of the failure of college graduates of today to seek positions with railroad corporations. While agreeing with the commonly expressed view that the stringent regulation of railroads has done much to rob railroad managers of opportunities to exercise discretion in the direction of their business and consequently rendered the work of the railroad executive unattractive to young men who want positions in which there is free play for individual initiative, he claims that this is not the only reason that railroad employment is distasteful to college men, pointing out that the present and the past policies of railroad corporations in the selection and promotion of officials have been such as to discourage most college men from entering the railroad field and to dishearten the few who have entered to such a degree that the ambitious ones seize the first available opportunity to leave. It would be a good thing for all railroad directors and railroad presidents to

read Professor Cunningham's observations on this topic, and to ponder upon them for a time.

In his discussion of the Transportation Act the author has committed one error. He asserts (pp. 225-26) that if a carrier earns in excess of six per cent on its property value "during the first two years of operation under the Act" one-half of such excess is to be recaptured by the Government, and implies that the reduction of the fair rate of return to five and three-fourths per cent made the recapture clause applicable to earnings in excess of the new rate, or to earnings in excess of any rate which the Commission shall designate as "fair." The recapture clause apparently applies to earnings in excess of six per cent, at all times, regardless of the fair rate of return established by the Commission.

T. W. VAN METRE.

VANDERBLUE, HOMER BEWS, and BURGESS, KENNETH FARWELL. *Railroads, Rates, Service, Management*. Pp. 488. New York: The Macmillan Company, 1923.

The authors of this book have performed a double service: they have demonstrated the erroneous nature of the all too commonly expressed view that the college professor and the railroad official have little or nothing in common, and they have written, in a thoroughly satisfactory manner, a highly useful book. The title is somewhat deceptive, as the work is not an exposition on the rates, service, and management of railroads, but a careful and intensive study of public regulation of those aspects of railroad enterprise. With the widening scope of regulation, the Interstate Commerce Commission and the Federal courts have established a substantial body of rules and precedents, in which are embodied the policies that now largely determine the action taken in dealing with particular sets of circumstances and conditions. This volume gives an analysis of those policies, with full reference to all pertinent decisions. Industrial traffic managers and railroad officials should welcome such a comprehensive discussion of the fundamental precepts of Federal regulation, with the clear statements of the rights,

duties and obligations of shippers and carriers. The book will also be of great value to teachers of transportation, and it will be read with interest by the large number of individuals who have little connection with the practical problems of railroad transportation, but who are concerned with the subject of railroad regulation on account of its outstanding importance among the public questions of today.

The first part of the volume outlines the powers and functions of the Interstate Commerce Commission, telling how this important tribunal does its work, and showing its relation to the Federal judiciary. The second part covers the question of rate regulation. It describes in detail the authority which the Commission has over rates, gives a sound treatment of the theoretical aspects of rate making, and discusses the many practical considerations which have swayed railroad officials and regulating authorities in molding the railroad rate structure. The third part takes up the regulation of the railroad service, dealing with the establishment of rules for the promotion of safety and health, and telling what has been done to give the shipping public certain rights and privileges with respect to train service, car service, and various special services related to the movement of freight. The final section on management treats of such questions as railroad credit and finance, labor policies, accounting, and the proposed plan of railroad consolidation. Three appendices give an outline of the development of railroad regulation in the United States, a list of suggested readings, and a table of cases cited.

The authors do not often intrude their own opinions, contenting themselves with statements of facts and obvious conclusions, and at times raising interesting questions with regard to controversies now impending because of the changes wrought by the Transportation Act. There are a few errors of minor importance. The term, "through rate," is used almost invariably as being synonymous with "joint rate." It is not true (p. 60) that a greater number of rates is published by tariff publishing agents than by individual carriers. The discus-

sion of the law with respect to the right of carriers to load and unload carload freight is somewhat misleading, the cases referred to not supporting all the implications of the statements made (p.286). There are a few glaring typographical errors, such as 18,-900,000 for 18,900,000,000 on page 350, and "get" for "go" on page 397.

What will impress the general reader who takes up this work is the amazing extent of the regulation to which railroads are now subjected. Whether for good or for ill the business of railroad transportation has lost nearly every vestige of private business conducted for profit. While there may remain in the railroad service many opportunities for the display of individual initiative, this initiative must be exercised within metes and bounds, established, presumably, in the interest of the public. It is not surprising that railroad officials complain about the present situation, and one may well ask whether, in view of the opportunities offered in other fields of economic enterprise, the railroad business will long continue to attract men of vision, faith and courage.

FISHER, ARNE. *The Mathematical Theory of Probabilities and Its Application to Frequency Curves and Statistical Methods*. Pp. xxix, 289. New York: Macmillan, 1922.

The book is the second edition of a book originally published in 1916 but now greatly enlarged. When Mr. Fisher published the first edition, dealing with mathematical probabilities and their application to homögrade statistical series, he promised a second volume on heterögrade statistics and the theory of curve fitting—a promise the fulfillment of which many of his readers have no doubt been awaiting patiently. In this enlarged volume completed, as he states in his preface, after many delays owing to the war, he has incorporated some of the material that was to have been included in the second volume and he holds forth still the promise of an additional volume.

The original book made available for the first time to many American students of statistics, the developments of the theory of probabilities by continental writers,—as

founded by Bernoulli, Laplace, and Poisson and as further developed in particular by the Scandinavians, Germans and Russians. The present edition further develops the application of the theory of probabilities to heterögrade statistics,—statistics of variables, as the English barometricians would call them,—as the subject has been developed largely by the Scandinavians, Gram, Thiele Westergaard, Charlier and others.

The book makes rigorous demands upon the beginning student, especially he who has not been thoroughly grounded in higher mathematics, but this is a mark of its excellence. The subject is not a simple one, and the American student is profoundly to be congratulated that Mr. Fisher has brought within his reach the researches of European statisticians and actuaries in this fascinating science.

FISHER, IRVING. *The Making of Index Numbers. A Study of Their Varieties, Tests and Reliability*. Pp. xxxi, 526. Price, \$7.50. New York: Houghton, Mifflin Co., 1922.

The writing of this book marks a service to the science and the practice of statistics that, it may be ventured, will not be duplicated for some time. For Professor Fisher has performed the two-fold task of making far-reaching contributions to the theory of index number making and of presenting his results in such form that others than specialists can understand them.

In recent years there has been a tremendous expansion in the use of index numbers and in the numbers constructed for various purposes. Many of those to whom has fallen the lot of making these new tools have not been specially trained and it was but natural that they should follow the precedent of some index number with which they were familiar. At the same time there has been no little discussion of index number theory by such men as Edgeworth, Flux, Knibbs, Walsh and Professor Fisher himself. Professor Fisher's book has achieved a notable success in being written to the laymen as well as to the specialist. Where mathematical development has been possible, he has supplied it but has placed it in the appendix; the main body of his

argument and his conclusions are presented in clear and non-technical language and are copiously illustrated by charts and curves.

The book raises the question, "What is the best formula for constructing an index number?" and furnishes an answer through the study of 134 different formulae. The tests by which final selections are made are two, the time reversal and the factor reversal tests. The former has been used by previous writers but the latter is new. The application of these tests to various formulae brings to light two kinds of bias—(1) type bias, inherent in certain forms of average when used to average ratios, or relatives; and (2) weight bias. The latter, again, is Professor Fisher's contribution, though he credits Walsh with having recognized, by implication, the need for different weights with different averages.

He discards, as wrong in theory, the circular test, stated many years ago by Westergaard and defended most recently by Walsh. To one, who to be sure has no right to challenge the opinion of Professor Fisher in this field, his defense of his position on this point seems not entirely convincing; but, as he shows, the divergence of his "superlative" formulae from complete satisfaction of the circular test is so small as to be of no moment in actual practice.

The one issue that seems to have been conclusively settled by the book is one that involved a wide difference of opinion between Professor Fisher and some of his American co-workers in the theory of index numbers, the issue as to whether the purpose for which an index number is used is an important factor in the selection of the formula—and it seems to have been settled in Professor Fisher's favor. An index number which has an inherent bias is not a good one for any purpose.

The practicing statisticians will probably find the book a great aid to them in improving the character of the many indexes they are being called upon to construct; for the academic statisticians, the reviewer can testify that the book is a boon—formal instruction in index number making will be much easier henceforth—and much more efficient.

BRUCE D. MUDGETT.

MITCHELL, MACAULEY, KING & KNAULTS.

Income in the United States, Its Amount and Distribution, 1909-1919, Volume II, Detailed Report. Pp. xiv, 440. New York: National Bureau of Economic Research, 1922.

This report publishes the detailed methods by which the estimates of national income and its distribution in the United States, found in the earlier summary volume, were obtained. The personnel of the economic staff of the bureau and the disinterested and impartial character of its activities gives deserved prestige to their study of income as the most satisfactory that has yet been made.

It is to be hoped, however, that everyone who has occasion to use any figure published in Volume I will have Volume II at hand and know, before using the figure, the difficulties under which it is determined. Indiscriminate use of estimates of total income or total wages in the United States may lead to serious error and it behooves all who use these figures to do so only with full understanding of the limitations which are revealed in the second volume of the report.

Worthy as is this effort to measure income in the United States it must be remembered that the data are not available for a satisfactory performance of this task and the volume contains many estimates subject to greater or less error. The authors have pointed these out with great care and in several instances have given a subjective estimate of the degree of error. Their "guess" at this error is probably better than any other, because of their familiarity with the data, but that does not remove the margin of doubt which attaches to any subjective estimate. One is reminded of a slogan that at one time adorned many of the offices of several war boards in Washington during the war: "It can't be done, but here it is."

The fact that estimates of total income of the United States based on the value product of the different industries agrees fairly closely to estimates based on incomes received by individuals justifies a considerable degree of confidence in these totals. The share of different industries or of dif-

ferent economic classes in this total income should therefore be a fair index of their relative purchasing power in different years.

BRUCE D. MUDGETT.

HILL, CHARLES E., PH.D., Professor of Political Science, George Washington University. *Leading American Treaties*. Pp. 399. New York: Macmillan Company, 1922.

This excellent commentary on American treaties of outstanding importance will be

invaluable to students of international relations. The great value of the book rests in the fact that it indicates the changes through which the treaties passed in the course of their negotiation, and thus enables the student to follow step by step their different stages.

Dr. Hill has done an important service to American students of international affairs in making this valuable material available in such clear and concise form.

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Memorial Addresses on the Life and Services of Simon N. Patten

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Tribute of the American Academy of Political and Social Science to the Memory of Dr. Simon N. Patten

Address of DR. L. S. ROWE
President of the Academy

WE are assembled to bring our measure of tribute to a great teacher, philosopher and friend. Future generations will measure far more accurately than we the full scope and the ultimate reaches of his influence. Of the present generation, those of us who had the privilege of being his students are fully aware of the profound influence of his teaching on our thought and attitude toward life.

There are three outstanding qualities of his mind, all of which contributed toward making him a great teacher. The first was his openness of mind to every point of view, combined with a willingness to give careful and serious consideration to every opinion no matter how widely divergent from his own. To every question to which he addressed himself, no matter how far removed from his special field of research, he brought an originality of viewpoint which illumined with new light and opened the door to new and unexpected solutions. At all times he showed an unwillingness to accept traditional opinion, unless tested by independent, searching analysis.

It was these three qualities that enabled him to develop in his students, not only profound intellectual curiosity, but also the determination to subject traditional viewpoints to independent tests.

It is no mere coincidence that three of the great scientific organizations of the country are today presided over

by his students: Dr. Samuel McCune Lindsay, President of the Academy of Political Science in the City of New York; Dr. Henry R. Seager, President of the American Economic Association, and Dr. James P. Lichtemberger, President of the American Sociological Society.

The educational history of this country offers but few instances of a teacher so deeply interested in the progress and welfare of his students. No sacrifice was too great for him when the advancement of one of his students was in question. He was prepared at all times to subordinate his personal affairs and convenience to the welfare of his students.

The members of the American Academy of Political and Social Science owe him a special debt of gratitude. During the early years of the Academy's history, when its founders were struggling to develop for this organization a place in the national life of the country, Dr. Patten's faith in the future of the work never failed. It was this faith and constant encouragement that carried the officers of the Academy through periods of depression and discouragement when the future seemed in doubt. Throughout the development of the Academy's work he constantly stood for the highest standards of intellectual integrity and freedom of opinion. In fact, nothing aroused him as much as any attempt to curb the expression of opinion. It was Dr. Patten's high

concept of the purpose and mission of the Academy that served as a constant stimulus and guide to those entrusted with the direction of its activities. He saw from the beginning that the Academy should be made to serve as a great national forum for the freest expression of opinion.

To his open mind every opinion was entitled to consideration. Intolerance was a thing utterly foreign to his thought. It was this trait as much as any other that made him a great teacher and, at the same time, a supporter of the truest democratic development. Year in and year out

he preached to us who were actively engaged in directing the Academy's activities to keep the organization free from entangling alliances and to allow no special influence of any kind to influence its work.

The Academy owes him a debt which it can never hope to repay. As an expression of appreciation for the services of one of its greatest founders the Board of Directors has decided to establish a special research fellowship to be known as the *Simon N. Patten Fellowship for Research*, to be awarded under such conditions as the Board may determine.

Address of DR. HENRY R. SEAGER

President, The American Economic Association

Like others of his generation, Dr. Patten gained his first knowledge of political economy from the pages of John Stuart Mill. His virile mind was attracted by Mill's lucid reasoning, but even as an undergraduate at Northwestern he was impressed by the inapplicability of Mill's conclusions to economic conditions in rural Illinois, where he was reared. His conviction that Mill's economic system rested upon too narrow premises was strengthened by his two years' study in Germany in the late seventies.

It would probably be difficult to exaggerate the effect of these German student years on Patten's later thought and work. It was the contrast between the consuming habits of the middle-class Germans that he met, and of the Illinois farmers he had lived among, that first directed his attention to that neglected department of economics, consumption, in which some of his best later work was done. In the German literature of the period he found support for his view that while free trade might be

best for England, protection was needed to foster the industrial development of countries like the United States and Germany. Finally he was greatly impressed by the way in which the Germans increased their enjoyments through social and community activities. There were the numerous public parks and playgrounds, the municipal theaters and concert halls, and the endless social clubs and *Kaffee-kletsche* meeting at inexpensive restaurants. Also there was the government administration of the street and steam railroads, which brought short trips to the country and the mountains within the reach even of German wage-earners. He saw that while the Illinois farmer was richer, the middle-class German was in many ways better off. The important truth which then impressed him, that social welfare depends quite as much on the way in which wealth is used as on its amount, colored all his later economic thinking.

Returning to the United States, Patten spent the next ten years mostly

in that clarifying if exhausting occupation, teaching or acting as principal of secondary schools. It was in this period that he prepared and with a good deal of difficulty found a publisher for his first book, the *Premises of Political Economy* (1885). This was an attempt to recast the economics of Mill so that it would apply to American conditions. It was a challenge to the assumption of the English *laissez-faire* school that individuals know what is best for themselves and if left alone will secure it, and an argument for government interference with the free play of economic forces through protection and other measures for the promotion of the general welfare.

It was this book and the courage and insight of his friend of Illinois and German student days, Edmund J. James, Dean of the recently organized Wharton School, which caused him to be called as Professor of Political Economy to the University of Pennsylvania in 1888. The opportunity for concentration on his special subject and the more stimulating associations of a great university, which this appointment offered to him, made possible the tremendous literary output which followed almost to the close of his life. In addition to the monographs and books which appeared at regular intervals—some twenty in all—including the *Consumption* (1889), the *Economic Basis of Protection* (1890), the *Theory of Dynamic Economics* (1892), the *Theory of Social Forces* (1896), the *Development of English Thought* (1899), the *Theory of Prosperity* (1902), *Heredity and Social Progress* (1903), and the *New Basis of Civilization* (1907), Patten contributed one hundred and thirty-two articles to periodicals during the years from 1889 to 1920, whose titles have already been listed by my colleague at Columbia, Professor Tugwell, and probably

many more, no record of which has been preserved.

This is hardly the place to attempt a detailed appraisal of Dr. Patten's contribution to economics. The striking aspects of his thinking are originality and the attempt to find the theoretical justification for conclusions applicable to acutely and vividly apprehended concrete situations. Introspection caused him to trace the origin of his own theories as unfolded in his *Premises*, his *Consumption*, his *Protection* and his *Dynamic Economics* to the special conditions of the still new and expanding industrial civilization about him. From this the attempt to interpret the economic and social systems of other thinkers in terms of the economic conditions with which they were in contact followed quite spontaneously and we have his acute *Interpretation of Ricardo* and classical *Development of English Thought* as a result.

Just as his earlier contributions grew out of his realization that the premises of Mill were untrue or only half true of conditions in the United States, so his later contributions grew out of his realization that the separation of our economic from the rest of our social life is artificial and arbitrary. Beginning with his *Theory of Social Forces* (1896), Patten passed from the field of economics in the narrow sense to the broader field of sociology and history, but with an abiding conviction of the predominant influence of economic factors, which makes him, whatever problem he attacks, always and everywhere a Simon-pure economist. This appears quite clearly in his last important books, the *Social* (he might have said, *Economic*) *Basis of Religion* (1911) and *Reconstruction of Economic Theory* (1912).

Others will speak of these broader aspects of his work. I should feel

derelict if I did not use the few minutes I have left to pay my tribute of gratitude to Professor Patten, the inspiring teacher and loyal friend.

My own first acquaintance with Dr. Patten was through his earlier writings and his devoted pupils, Dr. Lindsay and Dr. Rowe, whom I met in the early nineties as fellow students in Germany. The interest these aroused led me to decide, almost over night, to come to the University of Pennsylvania for my last year of graduate study.

When I first met Patten I recall a distinct disappointment. In spite of his five years of life in this cultured city, he had put on few of the social graces on which first impressions so largely depend. This disappointment was entirely dispelled by my first contact with Patten in the class room. His method of instruction was simple and direct to a degree, but before the hour was over he impressed on his hearers, as he had impressed on his own mind, the points he had jotted down in pencil on the rough sheet of paper before him. As weeks passed, the conventional and only partly grasped theories of economics, which I had picked up during my three years of special study, began to seem less and less consistent and less and less adequate to a satisfactory explanation of economic facts, and to afford but a shaky support for any program of economic reform. Before the first term was over the searching analysis of accepted premises through which Dr. Patten led his advanced students, convinced me how far from finality was any part of the subject, and freed me, at least for the time being, from reliance on authority that was not supported by my own thinking and experience. More than any teacher I had ever met, Patten had the faculty of compelling his students to visualize the problems he discussed and think

their way through to their own conclusions. The more formal exercises of the class room were supplemented by unlimited opportunities for private discussion. For Dr. Patten at that period had literally no other important interest than his teaching and writing about economics. The stimulus and interest of that student year was continued during the eight years I remained at Pennsylvania as one of Patten's humble colleagues. It was through his encouragement that I undertook to write a textbook on economics that should try to combine and harmonize the new with the old. While most of that book was written after I left Pennsylvania, any value that the newer portions of it, like the chapter on *Consumption*, may have, was largely the result of Patten's influence. I mention these personal details because I know that my experience and indebtedness were paralleled by those of scores of other students. To all of us he was the prince of teachers and an ever-inspiring and helpful friend in connection with our own teaching and writing difficulties. His active and original mind was ever busy with some problem of economic or social causation. With little natural facility either for lecturing or writing, his penetrating insight and vivid imagination helped him to become a stimulating lecturer and an incisive writer. Opinions will necessarily differ as to the permanent value of his constructive contributions, but there can be but one judgment as to the inestimable aid he rendered American economic thinking in its task of freeing itself from the trammels of imported tradition and of opening up its new and rich native fields for analysis and research. Simon Patten, was, in my opinion, the most original and suggestive economist America has yet produced. All honor to his memory!

Address of Dr. J. P. LICHTENBERGER
President, The American Sociological Society

It is with a sense of deep appreciation that I am permitted on this occasion to speak in behalf of my colleagues in the field of Sociology. Many of us feel a degree of indebtedness to Professor Patten hardly secondary to the pioneers in our own subject. I presume there is nothing in the entire sphere of natural science which is comparable to the interdependence which is found in the social sciences. Each of us studies the pluralistic behavior of men which we call society merely from the point of view of his own peculiar interest, but we study the same group. There are no boundaries which set off our subjects as distinct and separate. The economist, the political scientist and the sociologist views the same life process merely from different angles. Each contributes to the others the results of his investigations and it is in the resulting synthetic view that a more adequate description of social phenomena is obtained.

Thus there exists a bond of sympathy, understanding and friendship among these associated groups and among their constituent members which transcends that of mere coördinated effort. It becomes exceedingly intimate in its character. Such was Professor Patten's relationship to us. His interest was personal as well as scientific and we thought of him not merely as co-worker but as friend. He always insisted that the separate designations among workers in the field of social science were artificial and of little consequence. The important thing to him was the impulse which lead men to social investigation, and through it to social service in any division of the field. With all such he felt a spiritual kinship and

for all such he held the highest regard.

It was, therefore, more in jest than in earnest, I think, that he repudiated the name sociologist, so frequently applied to him, for he had no hesitancy whatever in contributing to the science either in its theoretical or its practical aspects. No one whom I have known has ever taken keener delight nor derived greater satisfaction from the knowledge that he had contributed to clearer thinking or to saner views in any field. He was totally devoid of professional jealousy.

Not only in regard to his scientific interest but in respect to the character of his mind, Professor Patten was always difficult to classify. The vigor and originality of his thinking always challenged attention. He was a mental tonic. Whether one agreed with his conclusions or not, to hear him speak or to read his articles or books was always a stimulus which set one's mental machinery going at an accelerated rate. He was always thought-provoking and though sometimes unsystematic and often illogical himself, he nevertheless compelled systematic and logical thinking in others. What appeared to some to be "a strain after the novel" which seemed to characterize much of his teachings and writings, was in reality nothing but the unconventionality of his thinking. He saw things differently and he described them uniquely. Such minds are always intensely suggestive if they are not always convincing. For this reason his admirers greatly outnumbered his followers. In fact, to follow him required an agility in changing one's mind, in grasping new concepts and in formulating new views possessed by but few. That men should change their views with the discovery of new

truth he held to be a criterion of intelligence and of mental growth.

It would be impossible here, even if it were desirable, to mention even by subjects Dr. Patten's many contributions to the social thought of the time. Many of his views put forth in his earlier writings he modified or corrected in his later work as a result of the unfolding of his own thought processes. He was fond of saying that books were of little value because by the time they were published the author himself had outgrown them and had finished with them. This was certainly largely true in his own experience. He always refused to be judged by what he had spoken or written previously, claiming that it represented merely the state of his intellectual attainments and of his knowledge at the time.

There is one outstanding doctrine, however, which he formulated and which in its amplified form has withstood his own searching criticism and which has found almost universal acceptance by sociologists as a valuable contribution to the theory of social progress. I refer to his theory of the pain and pleasure economy, developed in his *Theory of Social Forces*, copyrighted and published by the American Academy of Political and Social Science in 1896. It sketched with remarkable insight the evolutionary stages in the transition from a deficit economy both material and spiritual, characteristic of primitive society, to a surplus economy characteristic of modern civilization, and pointed out the difficulties involved in the transition.

Valuable as this type of thinking is for the interpretation of social phenomena, there is another service which it rendered of no small consequence. It saved its author and all those who grasped its significance from vagaries and ill-conceived efforts

at revolutionary social reform by placing reliance in social processes and in a social service that is constructive and evolutionary.

This leads logically to another phase of his influence which in many respects is as notable as that of his intellectual achievements. It emanated as a synthetic product from the quality of his mind and of his soul. Like all truly noble spirits his ultimate purpose, lying behind all proximate purposes, among which was his belief in the efficacy of correct thinking, was to be of service to mankind. He believed in the final triumph of truth, and he contended earnestly for the faith that was in him; but he realized likewise that the best exposition of the truth is its exemplification in human personality and in self-conscious and wisely directed human effort. The result was that his students went out from his classroom imbued not only with a love of knowledge but also with a love for their fellowmen. As an inspirer of men to social service, he was without a superior, if not indeed without a peer. In the final appraisal of his influence, I believe it will be found that he contributed more to the value of constructive social effort than to social theory. I think it is safe to say that his students today throughout the United States fill more responsible positions extending over a wider range of social work than those of any other teacher of his generation, with the possible exception of the late Charles S. Henderson. If this opinion is correct, it is, then, in the field of what popularly is termed practical sociology that his greatest contribution was made to our subject.

Professor Patten's clear perception of the principles of causation in the social sciences enabled him to foresee and to forecast the trend of events in social development with a remarkable

degree of accuracy. Two samples must suffice to illustrate this observation.

He was a prophet and a champion of the feminist movement. He read in the development of modern civilization the clear indications of the coming change in the status of women. He foresaw likewise the dangers and difficulties involved in this transition and with a tender solicitude he sought to direct the movement into broad and sane channels. No one, I think, understood the emotions and aspirations of women better than he. He believed in the education of women as a necessary prerequisite to the proper use of their developing opportunities, and in their right to the ballot as a necessary condition of responsible citizenship. From the start he championed the cause of equal suffrage and in the early days of that conquest in order to identify himself conspicuously with the movement, he marched in parades under the banner "Votes for Women" at no little sacrifice of personal and professional dignity in the opinion of many of his less progressive friends, if one might judge by their jibes at the time.

The calmness and the absence of resentment which he exhibited on such occasions, and with which he endured criticism or reproach attendant upon the propagation of new or unpopular views, was due to the moral earnestness with which he held his convictions and to the unshakable belief that in the end the truth would prevail, that its advocates would be vindicated, and that the skeptic and scoffers would turn disciple and defender.

The best and most concrete example of his prophetic vision is the Wharton School of the University of Pennsylvania. Repudiating the theory of formal discipline, now almost completely discarded, as the function of

education, and seizing upon the doctrine of interest, he forecast the trend in future educational needs. Given a body of subject matter which appealed to the student because it lay in the path of his developing interests, and given a proper presentation of that subject matter, Dr. Patten assumed that intellectual training followed as a matter of course. Without depreciating the usefulness of cultural studies or the coördinating value of the more general aspects of the social sciences, he nevertheless by dint of continued insistence upon the practical, that is, concrete, courses which divided and redivided the field of economics to admit of intensive work in its several departments, by encouraging young instructors to take up and to develop these new subjects and to create a new literature in the form of textbooks, and further by giving them the most generous encouragement and even in some instances personal financial assistance in addition to recommendations for deserved promotion, Professor Patten succeeded in laying the foundations upon which has been erected the present institution with its thousands of students and alumni drawn from all the states of the Union and from many foreign countries.

In pointing out these facts I do not wish to be understood as underrating in the slightest degree the genius and foresight of the founder of this school whose name it proudly bears, and who made possible by his generosity this successful experiment in education. Nor do I forget that able group of contemporaries whose coöperation and whose devotion and loyalty to a great purpose made possible its development. I mean merely to stress the signal contribution of Dr. Patten, to whom more than to any other man, I believe, belongs the honor and the credit for the actual internal development both

in theory and in content of a type of education which has proved its soundness and its utility, and has justified its existence by its extension in recent years to scores if not hundreds of other colleges and universities throughout the country and by a growth in the Wharton School itself which is limited only by its facilities.

I cannot refrain from using this opportunity to allude to the purely personal side of his character. It was the happy lot of a few of us, because of our close association with him in the faculty of the Wharton School, to have known him in the intimacy of his private life. He was intensely human. His intellectual generosity was exceeded only by the bigness of his heart. His interest not only in the achievements but in the personal welfare of his boys, as he frequently called us, might be termed fatherly. His own personal comfort and convenience he always was willing and even anxious to sacrifice for the advancement of others. None of us is without many pleasant memories which we cherish of his kindly offices in our behalf. In all instances of physical, mental and even pecuniary distress he was at our beck and call and his response was always sympathetic and generous,

yet he always insisted that he had never been imposed upon by his friends. When larger opportunities elsewhere were offered to any of the younger men of his group, selfish considerations of personal convenience were absolutely disregarded and his generous recommendations were given cheerfully, if he believed their best interests were involved. This was his fixed policy from which he never deviated.

He was absolutely without envy or jealousy and he held no malice or resentment. In his work and in his play—a side of his life which only his intimate friends knew—he was always congenial.

It was mainly this deep feeling of personal regard which he inspired that drew to his bedside from time to time, during his last and protracted illness at the secluded village of Brown's Mills-in-the-Pines, a place which he loved so much, a host of his colleagues and former students from far and near, and in whose visits and kindly attention he took great pride and comfort. No term of endearment could be found more fittingly to express our feeling of respect, of loyalty and of affection within this inner circle than the one familiarly employed when we called him "Uncle Simon."

Address of DR. LIGHTNER WITMER

The American Philosophical Society

After a talk with Patten, you found that he had somehow kindled a flame of thought, which kept on burning until you saw by its light many things, which before had been obscure. The particular idea you took from him might amaze you, it might even amuse you—it seldom convinced you—but it gripped you and you had to wrestle with it as Jacob wrestled with the angel. In the end, you changed your point of view without necessarily yield-

ing to his opinions or accepting his facts. However, opinions and facts are more easily changed than intellectual and moral character, the medium in which Patten worked as a creative artist. He made men different from what they were in thought, feeling and conduct, because he changed their orientation. He was the artist teacher of whom Socrates is the prototype.

In other words, he cut deep and revealed the hidden heart of things—

he aimed high and sought the regeneration of the souls of men. The things he dealt with were of the earth-earthy, for he was by profession an economist, concerned with the exchange value of this world's goods, but his orientation was that of the moral philosopher. When he talked on economics one got a point of view in psychology and philosophy,—new to me then, and too new even now, for many, but nevertheless, as he himself pointed out, as old as Adam Smith and David Hartley. He believed that intellectual, moral and economic values are terms in which men express their often conflicting wishes and needs. The social sciences, among which he reckoned philosophy, psychology and religion, have a common origin in the study of behavior. He did not vulgarly believe that one science can be based upon another, but he kept adverting to the facts of human nature as the basis of every science. The range of his intellectual interests comprehended the Humanities. He was a part of, and contributed to that stream of modern thought which originated with Descartes. He gave unique value to the deductive method and to generalization: He persistently employed these methods in working out the practical consequence of his theories. He struck the significant note of pragmatic philosophy—that pure science and applied science are inseparable—that truth must be in some way useful. If he goaded men to think for themselves, he also inspired them to work for others. From a great height, he would point to the promised land of his creative imagination. If his students only vaguely discerned its features, obscured by the mist of distance, they did not fail to take to heart his urgent call to immediate service. His scholarship and personality enabled him to inspire a large and productive

group of enlightened, well-trained and enthusiastic workers for the general welfare.

There are some who cannot overlook the absence of good form. Men like Patten need a Boswell or a Plato to make their work palatable, and themselves acceptable, to such as prefer the comfort of good form to the joy of original thinking. The essence of personality, however, is idiosyncrasy. Eccentricity, abhorrent to what passes current as "good taste," appeals to the artistic judgment, for the creative artist reveals undiscovered beauty and truth, compelling the vulgar in due process of time to change their tastes and their beliefs. A great sculptor would have preserved for all time, in bronze rather than in marble, that powerful and awkward boney structure, the bizarre gesture, the kindly eyes, the thoughtful and wholly disinterested sincerity, the fine dome of skull, the determined but pacific solidity of jaw. This statue would have made a companion piece to Barnard's "Lincoln," for the two were of the same physical type and presented for our admiration similar moral and intellectual qualities. I should like to dwell upon many characteristics they had in common, but I have time only to point out what lay at the heart of both—a profound and exalted ambition to achieve their best for humanity; hence, the aspiration for self-culture and the pertinacity that overcame deficiencies and ultimately brought success. The uncouth railsplitter, without the benefit of a single unit of English in a cultural college course, achieved a perfect bit of English prose. The inarticulate plough-boy produced original work that compels speculation as to how long the annals of thought will keep his memory alive.

William James is reported to have said that a man does well to write a

book which lasts as long as ten years. The immortal work not only endures but increases in relative value year by year. Adam Smith, Ricardo, Karl Marx and Henry George are more alive now than they were in their own day and generation. Genius rarely makes an instantaneous appeal, and if Patten had genius, I would expect the full note of just appreciation to be heard first as an echo from the opposite shore of the Atlantic. Intellectual originality is not an American weakness, and the eccentricity which is genius commonly gains recognition in this country only after it has won approbation abroad. Walt Whitman must be crowned with French and British laurel before his "rustic compatriots," as a French critic rudely calls us, will give over either ignoring him, or treating him as "the village idiot." That Henry George lived for a time in Philadelphia, I learned from the headmaster of a private academy where he had gone to school. "We are not very proud of the fact," the schoolmaster added, with the furtive movement of one who closes a door quickly on the family skeleton. The closet door may now hang open, for Henry George has established an international reputation. Some day, a Frenchman, or perhaps a Russian, will show us Patten's worth. I do not venture to estimate his meed of immortality, but I dare maintain that no American contributor to economic thought, Henry George excepted, has a better chance of intellectual survival than Patten.

Fundamentally a philosopher, with something of the poet's insight and a prophet's predilection, Patten anticipated the trend of modern psychology in making human motives the central problem of economics. Joy and pain are the primary reactions of human

beings to their environment; they are expressions of metabolism, which sets the stage for the economic problem of consumption. Joy, love, hope and faith express the anabolic process—they are a display of the surplus energy of the organism, which, if I understand Patten aright, he thought to be coincident with an economic surplus. Grief, hate, fear, and suspicion express the catabolic process, coincident with an economic deficit. It is to him that we owe the distinction between a pleasure and a pain economy and their identification with the Heaven and Hell motives of religious aspiration. The development of religion and morality, of intelligence and civilization, he thought should be stated so far as the material environment is concerned, in terms of economic surplus and deficit; so far as the organism is concerned, in terms of surplus energy. Some form of this generalization is destined, I believe, to play a leading part in the proximate development of several sciences. Time will show whether Patten was able to clothe his ideas in language sufficiently clear and forceful to have them long identified with his name. Henry George has the advantage of a perspicuous style; Patten excels in the comprehensiveness of his generalizations.

To praise and dispraise, Patten was singularly indifferent. Though appreciation cheered him, he went his way quite well without it. I seem to see him disappearing into the distance, his eyes fixed hopefully on some remote horizon. I think his hand is still at the plough, as it was throughout life, and the furrow he draws stretches deep and straight across the boundless plain, while in the furrow beneath the freshly turned sod lies revealed some of the mystery of our productive Mother Earth.

Address of Dr. E. P. CHEYNEY

Professor of History, University of Pennsylvania

It is hard to realize, especially for those of us who did not see him in his last sickness, that Dr. Patten is no longer in the land of the living. His was so distinct a personality, so individual, and so clearly marked from all others, that he was not one of any type, but just himself, and it is hard to believe we will not meet him again in any of his familiar walks or places of work or recreation. It is also difficult for those of us whose life is spent so largely in the University to realize that his connection with it is finally and definitely broken. It is true that for some years his official connection has been severed, but for so many years before that time his life and work were so intimately bound up with it and even afterward he was so readily accessible and so constantly consulted by those of us that remained, that he seemed still to belong to us. For almost forty years, almost as long as I can remember the University, he was an essential part of its life. I want to say a few words about each of three aspects of that life.

From an administrative point of view his influence was well described by a somewhat informal expression which Professor Fullerton, who was then Vice-Provost, used one time as he came out from a committee or faculty meeting. He spoke of Dr. Patten as a "live wire." His influence on the Faculty was always a distinctive one. This was due partly no doubt to the fact that he came into an institution and a city of somewhat set habits and ideas from entirely different surroundings and experiences, and he brought their alien and invigorating influence with him. But it was also due to his maturity at the time he entered the University. He was already a man in his prime with his beliefs and ideals full-formed when

he entered the University, and these ideas came into competition with those of men who were coming up through the ranks here, who had not before been compelled to formulate their views or to envisage the situation at any one time. Dr. Patten's ideas had therefore a sharpness of outline and distinctiveness that local policy did not possess. Then his individuality that I have already referred to always secured for his views and desires a hearing and an influence which, though they by no means always gained acceptance, exerted, I believe, a most valuable vivifying and broadening influence upon the development of the Wharton School, the College and the whole University.

Secondly, Dr. Patten was one of that only too small number of professors of the University who are also writers, men whose personal influence is extended through vastly wide circles through their printed works. Provost Smith told me that once when he was held up for a few minutes at a crossing by the turbulent traffic of a London street, he fell into talk with a chance fellow pedestrian who, when he found Dr. Smith was from Philadelphia, said to him, "That is where Patten and the University of Pennsylvania are, is it not?" The Provost was much impressed, as well he might be. Others will speak of Dr. Patten's work in economics. It would not be quite ingenuous for a student of history to seem to speak without reservation in praise of his writing, so far as that fell within the realm of history. His historical methods were much more subjective and interpretative than are generally approved in modern historical seminars or groups of critical historians. Nevertheless, it is remark-

able in how many cases other historians, even the most critical, have reached the same results as he. A strong sense of reality, much insight and great common sense enabled him to make correct generalizations even with methods which used by others might lead only to fantastic results.

Lastly, as a teacher; Dr. Patten once said to me that he would as leave teach little children as anyone else, that the interest was in seeing their minds work and "turning them inside out mentally," as he said. But his real power was at the other end of the educational scale, with graduate students. His perpetually fresh vitality, his keen interest in absolutely everything, his especially strong response to human personality, were all infectious, and awakened minds and overcame lethargy and aroused liberal impulses. Few men probably in the history of the

University of Pennsylvania, have attracted more young men of good minds and left a permanent influence on more disciples who have themselves gone out to hold influential positions.

To those of us who are getting older, the world often seems to be suffering an irretrievable loss by the death of its leaders in thought. But no one would have been less willing to accept this view than Dr. Patten. His invincible optimism had perfect trust in the future and in the discovery in the future of men adapted to its needs. The personal experiences of his later years; the war, so shocking to all his sympathies and hopes; his domestic disappointments; his unnecessarily early severance from the University—none of them dampened his enthusiasm or diminished his keen interest in the world, an interest which, I am inclined to think, is the keynote to his character and influence.

A BIOGRAPHICAL SKETCH OF SIMON NELSON PATTEN

By ROSWELL C. MCCREA, PH.D.

Columbia University

A man's life can be explained in composite terms of heredity and of physical and social environment. Unfortunately the requisite data are seldom known in sufficient detail to work out an utterly truthful biographical interpretation; and the task is further complicated by the prepossessions of the biographer who is wont, often unconsciously, through this refractory to color his work as well as to shape it in terms of relevancy to his estimate of the truth-absorbing needs of his audience. These difficulties bulk particularly large in the case of such a man as Simon Nelson Patten. An enigma to relatives and friends during his formative years, their memories are likely to be clouded by mis-

understandings or colored by so strong a desire adequately to explain later achievements that early facts are perverted or distorted out of true perspective. And Patten himself was little given to self-revelation. The very objectiveness of his attitude toward himself, coupled with the unconventionality of his views and manners and personal life, led to protective repressions, broken only occasionally by revealing glimpses. He never wrote any but the shortest of letters, and these always dealt with an immediate situation or with prospective action in some specific connection. I am inclined to think that to one fortified with the facts of Patten's early life the key to its interpretation will more

likely be found in the otherwise mystifying pages of his last book,¹ published only a few weeks before the beginning of his final illness, than from any other source. So far as latter-day (since 1888) associates and acquaintances are concerned, with few exceptions, their attitude is likely to be extravagantly laudatory, merely tolerant or cynical and depreciatory. Facts obtained through such channels are bound to be colored by a selective bias. All in all, his written works are his best interpreter. These in turn need an interpreter; but even to the partially initiated they do reveal a progression of development in style, in thought, in imagination and in understanding of life such as should yield Patten a prominent place in the ranks of the world's social philosophers.

Patten was of pioneer stock, in whom pioneering had become a habit stronger than the love of any place or set of customs and associations. His mother was Elizabeth Nelson Pratt, whose progenitors came over to Plymouth, Massachusetts, in the *Mayflower* and the *Ann* in 1620 and 1623. The descendants of these early settlers subsequently spread to New York, Ohio, Illinois, Iowa, Colorado and the Southwest. Among them was a Chief Justice of the Supreme Court of New York (1822-1836) and an Associate Justice of the Supreme Court of the United States who was also a member of the Joint High Commission to settle the Alabama claims. Members of the family have served in all of this country's wars.

Patten's father, William Patten, like Elizabeth Pratt, whom he married in 1843, was born in Washington County, New York. His grandparents had come from County Monaghan, Ireland, in June, 1794. They were of Scotch-

Irish extraction, rugged and unbending Presbyterians, gifted with energy and foresight typical of American pioneers of the frontier days. William Patten was a stern man, but a strain of humor tempered this trait with a measure of sympathy. He was mentally alert, physically impressive, and fairly facile of speech. He was the first farmer in De Kalb County, Illinois, to till his land and to erect a windmill. A typical, prosperous, progressive, mid-western farmer, he served as captain of infantry during the Civil War, as a member of the Illinois legislature, and for forty years as a ruling elder of the United Presbyterian Church.

The Pratts were slower in body, mind and speech, more incorrigibly Scotch in stubbornness of temperament, more independent of the influence of their social surroundings than the Patten strain. Simon's mother died when he was but four years of age, of typhoid fever contracted while nursing him through an attack of the same disease; but the Pratt heredity remained with him, dominant both in physical and in mental traits.

In May, 1843, William Patten took up a tract of virgin land in northern Illinois, and in January, 1845, immediately after his marriage with Elizabeth Pratt in Cossayuna, New York, moved with her to the new Sandwich homestead. Two sons were born here before 1850, but both died early. In those days infant mortality was high in the mosquito-infested, undrained prairie stretches of De Kalb County, Illinois. In 1850, William Patten followed the gold-seekers of his day to Sacramento, California, returning by way of Panama. The third son, Simon Nelson Patten, was born on May 1, 1852, a year after his father's return, at the home of his maternal grandparents in Cossayuna, New

¹ *Mud Hollow*—Doran.

York. The early months of his infancy were spent here, away from the malarial mosquito, but the succeeding boyhood years were altogether spent in the neighborhood of the Sandwich farm. He once told me a story of his first visit to Chicago which is illustrative of his father's parental attitude, and suggestive of the independence of his youthful years. He was then in the early teens. His father was in the habit of making periodic business trips to Chicago, then a city of about the present population of Trenton, New Jersey. On this occasion the two reached Chicago in the early morning. At the railway terminal Patten elder gave Simon several dollars, and abandoned him for the day with the suggestion that he look around the city and at a fixed time in the late afternoon be on hand at the railroad station for the return trip. During the day, Simon walked many miles, observed, reflected, and met his father at the appointed time for the journey home. This was one of his early lessons in the art of pedagogy.

The physical environment of Patten's boyhood and young manhood was a large prairie farm, immensely fertile and diversified in its activities. It yielded an abundance of the physical essentials of everyday life. The surrounding country was growing apace. The population of Illinois between 1840 and 1870 expanded from 8 to 50 per square mile. The area about Chicago grew even more rapidly. This growth was simultaneous with the great agricultural revolution, which displaced the scythe, the cradle and the flail, with the mowing machine, the reaper and binder and the threshing machine. Growth, improvement and prosperity went hand in hand. Social diversion was meager, but activities were vigorous and varied; and interests beyond the farm had a political complexion,

strongly colored by the partisan atmosphere of Civil War and Reconstruction days.

These conditions left an indelible impress on Patten's mental outlook, not yet related to any broad philosophy of life, but later to afford the germ of his surplus philosophy and one of the underlying phases of his theory of consumption. Even as a boy he was much given to fits of silence and brooding. It may be that he grew too fast—at fourteen he was 6 feet 2 inches in height—to develop into the active, healthy, imitative animal, commonly known as "boy." He was a failure as a farm hand, perhaps because he lacked requisite physical strength and endurance; but in any case, he was absent-minded and undependable in performing routine tasks to a degree that puzzled and at times exasperated his father. It was the pioneer urge in new guise. In its commonly recognized form this was destined to take the brothers and cousins of his home neighborhood to Iowa, Colorado, Oklahoma and the produce markets of Chicago. He turned to things of the spirit. It is not strange that his father was puzzled and that his associates thought him "queer." Too hard-headed by ancestry and early associations to be other than a mundane philosopher, yet too devoid of imitative qualities to absorb and repeat and elaborate the thought of others, he was destined to be bold and original and pragmatic to a degree inscrutable to more conventional-minded contemporaries.

In the district school of his home community he was one of about thirty pupils presided over by a single teacher. Spelling and mental arithmetic were the important disciplines. The former meant little to Patten; the latter appealed to him and he developed facility in it; but on the whole his native reac-

tions to fields and fences, barns and crops had larger significance in his mental development than the formalizing influences of the schoolroom. Always genial, never wilfully rebellious, he was of too intractable stuff ever to be fitted into any conventional mold.

At the age of 17, he went to Jennings Seminary at Aurora, Illinois. The presence of jurists in the ancestral tree suggested that Patten's oddities of mental make-up might be reminiscent of the qualities of these forebears. Enrolment at Jennings Seminary was to be the first step in a process of education for the law. This Seminary was the most noted institution of its sort in the region. Little more than a high school, judged by present-day educational standards, it had much of the tone of a college. Among its pupils in 1869 was Joseph French Johnson, whose friendship was to mean much to Patten in succeeding years. Its curriculum consisted mainly of mathematics, ancient languages and moral philosophy. There was a measure of urbanity in the life of the school community into which Patten fitted as awkwardly as in later years he did into the more cosmopolitan life of Philadelphia. His lack of adaptability never crystallized into the hostile aloofness of the boor; he was always a gentleman and he valued association with gentle folks; but for the superficialities of polite intercourse he utterly lacked acquisitive instinct.

He was graduated from Jennings in the spring of 1874. He then returned to the farm at Sandwich where he spent a year, during which the idea of becoming a lawyer was definitely abandoned. Philosophy intrigued him—thought about the essentials of everyday living and of progress. After a short period of study at Northwestern University his thoughts were turned to Germany as a home of philosophy in

which he might find the impetus to further development. In the fall of 1874 his friend Johnson had gone to Halle with Edmund J. James, whom Patten had thus far never met. Letters came from Halle recounting incidents in student life and stressing the German devotion to philosophy. The idea of joining Johnson and James as a student of Conrad and his colleagues at Halle, made a strong appeal. His father, generous of disposition and interested in a possible solution of a baffling problem, was easily persuaded. The little trunk was packed and the German adventure in education began in the fall of 1875. The following three years were rich in experience, not so much because of the offering of the lecture-hall or of the seminar as because of contact with a new set of conditions in the social life of Germany. There was a sharpness of contrast with the Illinois of Patten's day, full of significance to a mind awake to the realities of life. There were culture, traditions, a growing nationalist spirit, a developed local social life, individual thrift and an obvious play of intelligence in control of nature's forces. Illinois was a chapter on the bounty of nature, a denial of the pretensions of Ricardian philosophy. Germany was a lesson on the idea of conscious adaptation of activities to productive capacities, personal and environmental, with resulting economy and social gain. The combined experience suggested that nature is generous, and that man is capable of coping with the problems of existence. A philosophy of hope displaces the dismal pessimism of the Manchester School.

Patten came back to America another step advanced on the road of self-education. Throughout his years of schooling, the formal work of classroom or lecture-hall had meant little in his development. His sister recently

wrote: "I think no teacher meant much to him. He was a pupil who would learn without a teacher." It was the case of an original mind reacting directly to conditions as these presented themselves in the successive phases of his physical and social surroundings. During his three years in Germany he did not acquire even a passable use of the German language, but he did get impressions and out of these he wove his philosophy.

He returned to this country by way of England where he spent six weeks in the late summer of 1878. He was then twenty-six years of age. The following decade was a period of discouraging experience, marked by rural isolation and physical suffering, with no significant accomplishment. From May, 1878, to September, 1879, he worked on his father's farm, studying at intervals, but in the main incubating and drifting. Aside from teaching, there was little for him to do; and even in this profession, his ungainly physique, unconventionality of dress and demeanor, halting use of language and apparent perverseness and impracticality of thought were against him. His father was disappointed and discouraged, but after much travail of spirit on the part of both father and son, it was once more decided that Simon should study for the profession of law. With this end in view, he entered a Chicago law school in the fall of 1879. After six weeks of study his eyes failed him and for nearly three years he lived in pain and partial darkness. Bitterness was his portion during the early part of this period; but later, physical labor and the compensations of thought mitigated his suffering; and through it all he developed a feeling of sympathy for the victims of ill-fortune which never deserted him.

Meanwhile his friend Johnson had

taken up journalistic work in Chicago, and James had become a member of the faculty of the University of Pennsylvania. In May, 1882, Patten found his way to James, in the course of a visit to relatives in the East, and was taken to a Philadelphia oculist who fitted him with glasses which re-created his vision. On returning home, he taught for a year in the old district school in which he had formerly sat as a pupil, the next year moving to a better school position at Homewood, Illinois. Meanwhile, the outlines of a book were taking shape in his mind. The developing of these outlines and the reduction of resulting details to written form was a trying task. Those who saw the early manuscript of *The Premises of Political Economy* recognized its brilliancy and originality of conception but pronounced it unbelievably crude in form. With the aid of Johnson and of James, who in a measure succeeded in correcting grammatical errors and in giving it less deficient rhetorical form, it reached completion. James found for it a publisher in Philadelphia, and it immediately brought recognition to its author. In the spring of 1888, while serving as Superintendent of Schools in Rhodes, Iowa, Patten received notification of his appointment to a professorship of political economy in the University of Pennsylvania. He took up his work in this institution in the fall of 1888, and from that time until his unwilling retirement in 1917, indeed until his death in 1922, he knew no other institutional allegiance. ²These

² For an illuminating review and interpretation of Patten's career, more detailed than space limitations here permit, see articles by Rexford Tugwell in contemporaneous numbers of *The Journal of Political Economy* and *Publications of the American Economic Association*. I am much indebted to Mr. Tugwell for the privilege of seeing and using his manuscripts.

were his productive years, marked by a growing literary output, by a widening circle of disciples, and by an increasing influence on ideas, on institutions and on programs of social reconstruction.

His written work³ shows a continuity of intellectual development which many who lack his pragmatic quality have mistaken for inconsistency. He was always willing to abandon the earlier children of his mind in the interest of a more comprehensive truth, even though this seemed to involve him in contradictions with himself as well as with those who had adopted his progeny. His first book, *The Premises of Political Economy*, was an Americanization of the economics of Mill. In it he emphasized the importance of consumption habits in shaping national life and combated the assumption that the individual knows his own interest and if left alone will secure it. His monograph on *The Consumption of Wealth* carries this thought still further.

The Economic Basis of Protection ushered in a new set of ideas. He here inquired into the differences, physical and institutional, that distinguished America from England. He concluded that the weakness of the English economics was that it made no concession to changes in men and goods. He followed up this idea in his *Dynamic Economics* with a working out of the laws of economic progress. The close relationship between changing local conditions and changing policies was emphasized; progress and change were depicted as normal phenomena.

The Interpretation of Ricardo introduces the next phase in his thought. Ricardo, a city man and a proponent of

the new capitalist-industrialism, was a free trader; Malthus, reasoning like a farmer in the Corn Laws controversy, was a protectionist. Patten regarded these conflicting attitudes and their antecedents as illustrations of the fact that local conditions determine not only the relative desirability of varying social policies, but also shape ideas and modes of reasoning. This progression of thought led him to a repudiation of the old associational psychology and the old utilitarian ethics as foundations of economic theory. He therefore ventured to set forth new psychological principles to show how previously unrecognized mental traits tend to shape social progress. He did this in *The Theory of Social Forces*, in the introduction to which he said:

A new social philosophy cannot pass beyond the inductive stage until these (psychic) factors are recognized and a picture of mental activity constructed which emphasizes the elements neglected by the old philosophy. Even if the type of psychology which I present is faulty, it can at least serve as a provisional philosophy until psychologic research is far enough advanced to furnish a better basis.

The Development of English Thought is even more directly the outgrowth of his essay on Ricardo. In it he attempts to do for the whole English nation what the essay tried to do with reference to two individuals. Speaking of the undertaking, he says:

The theory presented is scarcely open to question, though some of its corollaries may not be evident. Survival is determined and progress created by a struggle for the requisites of which the supply is insufficient. These requisites are the goods for which men strive or the means by which they meet evils. A group of such definite objects, upon which the life and happiness of each race depend, always exists. The environment formed by this group of economic objects surrounding and support-

³ Professor Patten's *Theory of Prosperity* by Henry R. Seager, *Annals*, March, 1902, is an excellent review of Patten's thought to 1902.

ing a given race, changes with the several objects on which the interests of the race are centered. With the new objects come new activities and new requisites for survival. To meet these new conditions, the motives, instincts and habits of the race are modified; new modes of thought are formed; and thus, by the modification of institutions, ideals and customs, all of the characteristics of the civilization are reconstructed. These changes take place in a regular order; the series repeats itself in each environment. In its amplification and illustration lies the economic interpretation of history.

Professor Patten had two reasons for selecting England for his larger experiment in "economic interpretation." In the first place, the comparative isolation into which English civilization has developed makes the problem of interpretation easier than it would be for either of the great continental nations. Secondly, English experience had supplied the basis for the three economic systems in which he was most interested; that of Ricardo, that of Marx, and, in a more roundabout way, that of George. He hoped, through his profounder study, to show that the premises on which each of these writers based his conclusions in regard to the future of society were only of temporary validity.

It would take far too much space to attempt an estimate of *The Development of English Thought*. It is Professor Patten's own opinion that his method of interpretation answered fairly well until he came to Adam Smith. Here he admits it broke down, and it was his partial failure to portray Adam Smith satisfactorily that led him to formulate the leading distinction that appears in his *Theory of Prosperity*, that between "existing conditions" and "heredity" as determinants of income.⁴

The Theory of Prosperity dealt with

⁴ Seager, *supra cit.*

the "existing conditions" or economic phases of this contrast. To contemporary economists this work suggested a turning back on Patten's part to the confines of strictly economic generalization. But this was done in iconoclastic mood, and with no thought of setting bounds to his pioneering spirit. *Heredity and Social Progress*, a complementary volume, soon followed its predecessor. With a broad sweep of philosophic assumption and with widely ramifying social interest he essayed an analysis of discontent and its remedies. There was sharpness of contrast in his diagnosis between limitations on progress set by hereditary inhibitions and possibilities inherent in "existing" or economic conditions.

Heredity and Social Progress marks the end of one era and the beginning of another in Patten's development as author and social philosopher. At this point he turned from his earlier audience of scholars to the broader public. This change of emphasis was an inevitable outcome of his pragmatic view of truth, vigorously set forth and defended in his address as President of the American Economic Association. Aside from the *Reconstruction of Economic Theory*, his later books all show this trend and reflect a definite design to influence popular thought and social action. With growing ease and vigor of presentation, and with increasingly picturesque and aphoristic style he produced a series of volumes wide in range of social interest and appeal. *The New Basis of Civilization*, *Product and Climax*, *The Social Basis of Religion*, *Social Hymns* and *Mud Hollow* were the outstanding works of this last period. All of these embody the fundamental ideas of earlier years modified at many points and supplemented in detail by subsequent experience, observation and reflection. Through-

out his forty years of literary endeavor, his books were interspersed with a long array of articles in technical journals and semi-popular periodicals. But the best summary of his ultimate philosophy of life is doubtless that presented in the second or interpretative half of his final work, *Mud Hollow*. This merges the surviving elements of his thought of earlier years with the near-Freudian psychology of his latter-day interest. As a synthesis of ideas it is a rare combination of purposive iconoclasm and of hopeful prophesy.

Patten was a baffling personality. As a thinker he diverged far from accepted norms. Almost intuitive in his intellectual judgments, he refused to reason deductively from commonly recognized premises, and was equally averse to generalizing inductively from a broad array of data. He seemed rather to survey the field and to pick from the confusing mass of phenomena under review the sample datum which seemed to him typical and interpretative. He was in consequence always original and suggestive, bringing to light the play of factors too likely to be neglected or ignored by those whose thinking conformed to traditional modes. He was, of course, misunderstood by such, and condemned as unsound and erratic. This is not surprising; for anyone who had not kept himself steadily in touch with the progression of Patten's ideas from month to month—and few away from his immediate circle of influence could do that—would inevitably feel a sense of utter remoteness from the latest novel idea. Most of us are imitative and eclectic; Patten was completely independent and original. The chance of an identity in trains of thought between him and another was almost infinitesimal.

On the emotional side of his makeup he was conservative and loyal to the

last degree; loyal to friends, to party and to the institutions with which he was identified, though seldom in intellectual agreement with them. An illustrative incident will throw light on this seeming contradiction. No one had been more interested than Patten in sponsoring the social ideals which were adopted by the Progressive Party in their platform of 1912. Many of his most intimate friends and disciples were identified with the movement. Yet, he voted the Republican ticket, and on the night when the election returns came in, showing a heavier Progressive vote than that polled by the Republicans, he was a picture of disgust and dismay. I chided him for his inconsistency. He replied: "When the torchlights pass by and the band plays, I'm one of the boys of '61. I can't help it." The same emotional conservatism was shown by his life-long membership in the Presbyterian Church, as well as by his unwavering allegiance to the University of Pennsylvania.

He possessed a fund of native shrewdness quite at variance with his appearance of rustic simplicity. Never dishonest, and never seeking purely personal ends, he would often resort to an indirectness of action and of expression, equally mystifying to friend and opponent. This is a sample of his guile: Some years back, an appointment was about to be made to an academic position. Those responsible for the choice of the new officer wished to avoid the appointment of a Patten partisan. Patten induced an acquaintance, X, who was averse to any change in his own status, to allow his name to be presented as one of two nominees for the new post, on the plea that two names must be presented and that the appointment would unquestionably go to a second man, Y. X consented to the arrangement on these representations. Patten vigorously supported Y.

X, to his own chagrin, received the appointment.

This quality of caninness, coupled with a vital interest and with an ability to view problems from odd angles which did not occur to others, made him a much sought and highly valued counsellor. The later successes and public prominence of many of his old students are to be attributed in no small measure to their frequent touch with him, to his farseeing grasp of their problems and to the concreteness of resulting commentary and counsel. Tolerant of differences of opinion, unresentful of unkindness or neglect, non-conformist in views but conservative in action, gifted with uncanny insight, he was a molder of minds and a shaper of character far beyond the realization of his contemporaries.

The value of a man's short span of life is measured largely by what he leaves behind in the lives of his fellows, in his written work, and in the institutional life of the community. On each of these counts Dr. Patten deserves a ranking little recognized except by

those who knew him best. His unselfishness of purpose, objectiveness of outlook and unconventionality of manner have so obscured his merits or so completely merged the results of his labors with those of others, that the significance of his life-work is likely to be misunderstood or ignored. This is much as he would have it. Acclaim with him was no substitute for substantial accomplishment; and the latter he had in full measure. His written work is replete in suggestiveness to a degree not attained by any contemporary economist. He has said the last word on nothing; but his last word is more likely to be the first word in new restatements of truth than any of the words of hypercritical traditionalists. His old students have become men of note in every walk of life in a measure that is surely not fortuitous. And the organized life of the community in a wide variety of educational aspects has been enriched by institutions which are at once a projection of his personality and his lasting memorial.

SIMON NELSON PATTEN—TEACHER AND FRIEND, ECONOMIST AND
SOCIOLOGIST

By DR. SAMUEL McCUNE LINDSAY

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The special session of the American Academy of Political and Social Science to honor the memory of one of its founders, coming so soon after he has left us, is not the occasion for any attempt to praise in a detached and scientific manner, the great value of his service to the Academy, to economic science, to the profession of teaching or to the many public interests that Dr. Patten always had at heart. This is rather, I take it, a gathering of his friends, and those who have been asked to participate are for the most part

his very long-time friends, his pupils, and those to whom he has been for many many years a very real friend, philosopher and guide. I, certainly, for one cannot participate in any detached or objective spirit in a mere presentation or elaboration of his claims to greatness or to remembrance by those who knew little or nothing of his wonderful personality and of the depth and quality of that friendship which meant so much to so many of us. He shared the best that was in him generously and freely with his students and

his colleagues, and he opened his heart and mind frankly and completely to an unusually large circle of those who valued his friendship.

The number of his pupils into whose lives and personal affairs he entered in a most intimate way was unusually large. No one knows how many, or to what extent he shared most generously his own meagre financial resources with promising students who were thereby enabled to complete their academic preparation for useful careers. Such material aid, in addition to wise and intimate personal counsel, was given so unostentatiously and as a matter of course that its recipients, who were many, were led to feel that they were conferring on the donor a favor, and sharing in a common resource dedicated to the realization of common aims and ideals.

I doubt whether, in the whole history of secondary and higher education in America, there can be found as many teachers as could be counted on the fingers of one hand who were his peers in inspiration and as a source of dynamic power for as many persons as Dr. Patten counted within the circle of his intimate friends. It was my privilege to be a member of the first class he met when he began his career as a university teacher at the University of Pennsylvania thirty-four years ago. It was not many months before a little group of us came to know him as intimately and to look to him as confidently and expectantly for intellectual counsel and wisdom as though he had been our mentor and friend for years.

Charles Peter Beauchamp Jefferys, Jr., was the class historian of '89, and in the class history he speaks of Professor Patten having joined the Wharton School Faculty in our senior year and then goes on to say: "We think Professor Patten is 'just splendid.'"

Patten calls us 'his boys' and I don't think there exists a stronger bond of union and sympathy in college circles than between Patten and '89 in the Wharton School." That experience was repeated in the case of an ever widening circle of students from every succeeding class until he retired from active teaching four years ago after thirty years of active service. Such was the magnetic and sympathetic insight, and the stimulating and attractive power of a great teacher.

Personally, and I am sure that what I am about to say has been the experience of many of his friends, there has not been a single year, and scarcely a single month in all these long years since that friendship began in 1889, that I have not gone to Dr. Patten, usually in person and sometimes by letter when thousands of miles of ocean have separated us, with every serious problem and decision that I have had to meet in life and always found sympathy, courage, deeper faith in the worth of high endeavor and refreshment of spirit.

He was, indeed, a great teacher, but he was a greater economist. Economic science was for him not a mere section or isolated department of human knowledge, nor did he regard it as in any sense a superstructure imposed upon the traditions and learning of the race; economics was of the fiber and essence of all knowledge. In his thinking it furnished the fundamental key or explanation of life and of man's adjustment both to the physical universe in which he lives and to the moral and spiritual order of which he is a part. It was his "Lebensanschauung," his point of departure in the interpretation of life and in the understanding of its laws of growth and development. This is why he always showed a little impatience with what seemed to him the narrow current

controversies over the economic interpretation of history, because both the proponents and the critics of that doctrine, as generally stated and understood, seemed to him to be dealing in half truths. His conception of economics and of economic law, and more especially of the economic mode of thought was not materialistic; it had its application and significance for the whole of life and for every kind and phase of human motive.

Patten came of sturdy, American stock. He was born and reared on the frontier of American economic life. He was possessed of the pioneer spirit which accounts for much of the originality and rugged simplicity of his thought. He had a marvelous faculty of making economic analysis, economic laws, and an economic point of view seem very real and vital to the new student and satisfying to the inquiring mind. While he was well grounded in the history and logic of English classical economic theory and had been profoundly influenced by the German historical method, his approach in introducing the new student to the subject was never the traditional one of presenting either the formal conclusions of classical English political economy or the discussion of the history of economic theory. He was a devout follower and admirer of John Stuart Mill, but the secret of his power, both in the matter of exposition and teaching of economics as well as his own contribution to the development of economic science, has always seemed to me to lie in the fact that he handled the problems of economics very much according to the methods of modern engineering science. He began with an analysis of present conditions and factors, whether the problem was simple and concrete or complex and intricate with respect to both the factors of time and space. It was

thus that he succeeded in making economics contribute, whatever the value of the immediate practical results, to furnishing a solid intellectual grip on difficult problems.

Patten combined with a vivid imagination, which enabled him to visualize, simplify and clarify the factors in the discussion of a complicated economic problem or even of a whole stage or stratum of social development, a happy faculty of invention of apt phrases or new terminology. Who will ever forget the "Stalwarts" and the "Clingers," the social-debtor classes, the pain and pleasure economy, and a score or more of similar concepts that gave his students and his readers a new, illuminating and sure foothold in the exploration and examination of new facts in our economic world. He was not always skillful in the exercise of his powers of expression and much of his voluminous writing came as a result of painful and laborious work. Often the indirection of his methods in attaining his objectives puzzled his friends and misled his less understanding critics. It has always seemed to me due in large part to this limitation in his power of expression of which he was keenly conscious, and not to inconsistencies or change of front in his scientific methods. In the end he always succeeded in the classroom and in public or private discussion and, I think for the most part in his published work, in making his point clear to those who were patient enough to follow him in his successive efforts at re-statement of a position which he wished to take.

While economic theory was bred in every bone and fibre of his being, Patten was no mere theorist. He never took any satisfaction in philosophical hair-splitting. It was rather the application of economic reasoning

to the practical rules of conduct for the individual and for society, to social organization and group activity, that interested him most. He was quite as much a sociologist as an economist. In fact, had he come upon the stage of academic life a generation later and found theoretical and applied economics in America in their present development at the close of his academic career, I think he would have cast in his lot with the sociologist rather than with the economist. As it was, in his *Theory of Social Forces*, and his *New Basis of Civilization*, as well as in *The Social Basis of Religion, Culture and War*, and numerous other monographs and articles published in recent years, he has made no small contribution to sociological theory, to the study of social organization and social forces, and especially to experimental sociology in the fields of social legislation and social work. Perhaps a too exclusive emphasis on the economic factor or basis of social organization and social evolution has made his contribution to the formal organization of a science of society less fruitful than it would have been had he carried his researches farther in the fields of biology, anthropology and cultural history. I am confident, however, that the so-

ciologists of the future in the re-statement of sociological theory, after the present stage of integration of sociological research is complete, will put a high value upon and give a permanent place to many of Patten's sociological concepts. I am even more confident that many of these concepts will serve a useful purpose and come to be regarded as the most valuable contribution made by any American of this generation to the foundations of applied sociology. This is a field in which American effort has led the world through the wide range of experimentation in legislation, through the expression of the humane and philanthropic impulses of a society with a growing social surplus, and through the efforts to realize effective democracy in government and political institutions. While I suppose we shall all, as his students and friends, prefer to remember Dr. Patten for his labor and service as an economist, and no American teacher has placed us under a greater debt of gratitude for that work, and while the fruits of his service to sociology are not yet fully harvested and can perhaps not yet be fully evaluated, I believe our indebtedness will ultimately be none the less for this work.

A Bibliography of the Works of Simon N. Patten

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I. BOOKS

1. 1878. Das finanzwesen der Staaten und Städte der Nordamerikanischen Union.
Jena: G. Fischer. Out of print.
2. 1885. The Premises of Political Economy; Being a Re-examination of Certain Fundamental Principles of Economic Science.
Lippincott, pp. 244. Out of print.
3. 1889. The Consumption of Wealth.
Publications of the University of Pennsylvania. Pol. Econ. & Pub. Law Series, No. 4. Second ed. 1901. Out of print.
4. 1890. The Economic Basis of Protection.
Lippincott, pp. 144. Second ed. 1895. Out of print. French translation from the second ed. by F. Lepelletier appeared as: *Les Fondements economique de la protection, avec une preface par Paul Cauvès*, Paris.
V. Giard & E. Briere, 1899.
Italian ed: *La base economica della protezione*. Traduzione di C. Baer, in *Biblioteca dell economista Torino*, 1897. Series 4, Vol. 1, pt. 2, pp. 437-511.
5. The Principles of Rational Taxation.
Publications of the University of Pennsylvania. Pol. Econ. & Pub. Law Series, No. 6.
Papers of the Phila. Social Science Assn., pp. 25. Out of print.
6. 1892. The Theory of Dynamic Economics.
Publications of the University of Pennsylvania. Pol. Econ. & Pub. Law Series, Whole No. 11. (Vol. III, No. 2), pp. 153. Out of print.
7. The Theory of Social Forces. Supp. to Annals, 1896, pp. 151.
(Listed also among periodical publications.)
Italian translation in 1903 appeared as:
Teoria delle Forze Sociali.
C. Colombo, Editore, Roma.
No. 2. *Biblioteca Internazionale da Sociologia Teorica*.
Diretta del Dr. Fausto Squillace.
8. 1899. The Development of English Thought.
Macmillan, pp. 415. Second ed. 1904. Third ed. 1910.
9. 1902. The Theory of Prosperity. Macmillan, pp. 237. Out of print.
10. 1903. Heredity and Social Progress.
Macmillan, pp. 209. Out of print.

11. 1907. *The New Basis of Civilization.*
The Kennedy Lectures for 1905 in the School of Philanthropy conducted by the Charity Organization Society of the City of New York.
Macmillan, pp. 220. Second ed. 1907. Third ed. 1910. Fourth ed. 1912. Fifth ed. 1914. Sixth ed. 1915. Seventh ed. 1918. Eighth ed. 1921.
12. 1909. *Product and Climax.*
Huebsch, pp. 68.
13. 1911. *The Social Basis of Religion.*
Macmillan, pp. 247. Second ed. 1913. Out of print.
14. 1912. *The Reconstruction of Economic Theory.*
Supp. to *Annals*, pp. 99.
15. 1916. *Advent Songs: A Revision of Old Hymns to Meet Modern Needs.*
Huebsch. Out of print.
16. *Culture and War.*
Huebsch, pp. 62.
17. 1917. *Songs of America.*
Huebsch. Second ed. 1918, pp. 32. Out of print.
18. 1919. *Folk Love: A Union of Religious, Patriotic and Social Sentiment; Songs.*
Huebsch, pp. 91.
(A revision and enlargement of *Songs of America* and *Advent Songs*.)
19. 1922. *Mud Hollow.*
Dorrance, pp. 384.
20. 1923. *Forthcoming: Essays in Economic Theory* (Alfred A. Knopf, N. Y., to be issued in June). A collection of articles on the general subject of economic theory, reprinted from the periodicals in which they first appeared. Edited by Rexford G. Tugwell; with an introduction by Henry Rogers Seager. The essays to appear in this volume are as follows: The Effect of the Consumption of Wealth on the Economic Welfare of Society; President Walkers' Theory of Distribution; Malthus and Ricardo; The Theory of Dynamic Economics; Can Economics Furnish an Objective Standard for Morality? The Interpretation of Ricardo; The Economic Causes of Moral Progress; The Scope of Political Economy; A New Statement of the Law of Population; The Present Problems in the Economic Interpretation of History; The Conflict Theory of Distribution; The Making of Economic Literature; The Political Significance of Recent Economic Theories; The Theory of Price in Modern Economics; Pragmatism and Social Science; The Background of Economic Theories; The Revival of Economic Orthodoxy; The Reconstruction of Economic Theory; Taxation After the War; The Basis of National Security; Peace Without Force; Problems of War Finance; Liquidation Taxes; The Tomorrow of Finance; Mandeville in the Twentieth Century; The Fallacy of Price Bidding; Making National Debts National Blessings; and The Failure of Liberal Idealism.

II. PERIODICALS

1. 1888. The Stability of Prices.
Pub. of Amer. Econ. Assn. Series I, Vol. III, No. 6. Monograph, pp. 64.
2. The Teaching of Mathematics.
Educational Monthly. Vol. IX, pp. 6-13 and 79-86; Vol. X, pp. 553-6.
3. 1889. The Effect of the Consumption of Wealth on the Economic Welfare of Society. Science Economic Discussion.
The Science Co., Vol. of short papers by economists.
4. Malthus and Ricardo.
Pub. of Amer. Econ. Assn. Series I, Vol. IV, No. 5, pp. 1-34.
5. Same (Abstract).
Pub. of Amer. Econ. Assn. Series I, Vol. IV, pp. 399.
6. The Fundamental Idea of Capital.
Quart. Jour. Econ., Oct. Vol. III, pp. 188-203.
7. President Walkers' Theory of Distribution.
Quart. Jour. Econ., Vol. IV, No. 1, pp. 34-49.
8. 1890. The Decay of State and Local Governments.
Annals. Vol. I, No. 1, pp. 26-42.
9. The Educational Value of Political Economy.
Pub. of Amer. Econ. Assn. Series I, Vol. V, No. 6. Monograph, pp. 36.
Same: Educational Review, Vol. I, pp. 512 (reviewed).
10. The Educational Value of College Studies.
Educational Review, Feb. Vol. I, pp. 105-20.
11. 1891. The Need of New Economic Terms.
Quart. Jour. Econ., Oct. Vol. V, pp. 372-4.
12. Economic Aspects of Technical Education. (Discussion.)
Pub. of Amer. Econ. Assn. Series I, Vol. VI, pp. 115-22.
13. A Contribution to the Theory of Railroad Rates. (Discussion.)
Pub. of Amer. Econ. Assn. Series I, Vol. VI, pp. 56.
14. Another View of the Ethics of Land Tenure. Internat. Jour. Ethics, Vol. I, pp. 354-70. (This is a reply to an article by J. B. Clark: The Ethics of Land Tenure. Internat. Jour. Ethics, Vol. I, pp. 62-79).
15. 1892. The Importance of Economic Psychology to Teachers.
Amer. Institute of Instruction Lectures, pp. 1-21.
16. The Economic Basis of Prohibition.
Annals, Vol. II, No. 1, pp. 59-68.
17. Can Economics Furnish an Objective Standard for Morality?
Jour. Speculative Philosophy, Sept. Vol. XXII, pp. 322-32.
18. 1893. The Economic Causes of Moral Progress.
Annals. Vol. III, No. 2, pp. 129-49.
19. The Ultimate Standard of Value. (Discussion.)
Pub. of Amer. Econ. Assn. Series I, Vol. VIII, pp. 86.
20. The Idea and Definition of Value. (Discussion.)
Pub. of Amer. Econ. Assn. Series I, Vol. VIII, pp. 94.

21. Cost and Utility.
Annals. Vol. III, No. 4, pp. 409-28.
22. Cost and Expense.
Annals. Vol. III, No. 6, pp. 703-35.
23. Some Explanation Relating to the "Theory of Dynamic Economics."
Quart. Jour. Econ., Oct. Vol. VII, pp. 177-86.
24. The Interpretation of Ricardo.
Quart. Jour. Econ., Oct. Vol. VII, pp. 322-52.
25. Same. (Abstract and Discussion.)
Pub. of Amer. Econ. Assn. Series I, Vol. VIII, pp. 77-82.
26. The Scope of Political Economy.
Yale Review, Nov. Vol. II, pp. 264-87.
27. 1894. Same. (Abstract.)
Pub. of Amer. Econ. Assn. Series I, Vol. IX, Sup. 62-4.
28. The Failure of Biologic Sociology.
Annals. Vol. IV, No. 6, pp. 919-47.
29. The Beginning of Utility. (Briefer Communication.)
Annals. Vol. V, No. 2, pp. 257-60.
30. The Place of University Extension.
University Extension, Feb. Reprinted also as No. 4 of a volume of pamphlets, 36 pp.
31. The Organic Concept of Society. (Briefer Communication.)
Annals. Vol. V, No. 3, pp. 404-9. (For a reply by Prof. Small, see Annals, Vol. V, No. 5, pp. 740-6.)
32. 1895. Economics in Elementary Schools.
Annals. Vol. V, No. 4, 461-89. (A lecture given in the summer meeting of the American Society for the Extension of University Teaching, Phila., July 18, 1894.)
33. The Relation of Sociology to Economics. (Discussion.)
Pub. of Amer. Econ. Assn. Series I, Vol. X, Sup. 107-10.
34. The Teaching of Economics in the Elementary Schools. (Discussion.)
Pub. of Amer. Econ. Assn. Series I, Vol. X, Sup. 119-20; 137-8.
35. The Relation of Abstract to Concrete Sciences. (Briefer Communication.)
Annals. Vol. V, No. 6, pp. 942-8.
36. The Relation of Economics to Sociology. (Briefer Communication.)
Annals. Vol. V, No. 4, pp. 577-83.
37. A New Statement of the Law of Population.
Political Science Quart. Vol. X, No. 1, pp. 44-61.
38. 1896. Economic Psychology.
Journal of Education, Dec. 17. Vol. XLIV, pp. 412-13.
39. The Formulation of Normal Laws with Special Reference to the Theory of Utility.
Annals. Vol. VII, No. 3, pp. 426-49.
40. Same. (Abstract and Discussion.)
Pub. of Amer. Econ. Assn. Economic Studies. Vol. I, Sup., pp. 126-30.
41. The Relation of Sociology to Psychology.
Annals. Vol. VIII, No. 3, pp. 433-60.

42. The Sphere of Voluntary Organizations in Social Movements. (Discussion.)
Pub. of Amer. Econ. Assn. Series I, Vol. I, Sup. 158-9.
43. Theory of Social Forces.
Supp. to Annals, pp. 151. (Appears also among the list of books. The volume is bound separately.)
A reply by W. Caldwell appeared in *The International Jour. Ethics*, July, 1897.
44. 1897. Overnurtition and Its Social Consequences.
Annals. Vol. X, No. 1, pp. 33-53.
45. 1903. Distribution by a Law of Rent. (Discussion.)
Pub. of Amer. Econ. Assn. Series III, Vol. IV, pp. 169-70.
46. 1904. Education Through Activity.
Charities and the Commons, Aug. 6. Vol. XII, pp. 790-3.
47. The Present Problems in the Economic Interpretation of History.
Annals. Vol. XXIV, No. 3, pp. 540-55. (An address delivered at the International Congress of Arts and Sciences, St. Louis, Sept., 1904. Proceedings. Vol. 2, pp. 215-28.)
48. Young Wives in Industry.
Independent, Dec. 1. Vol. LVII, pp. 1244-9.
49. 1905. University Training for Business Men.
Educational Review, March. Vol. XXIX, pp. 217-33.
50. 1906. New Adjustments for Women.
Independent, Sept. 20. Vol. LXI, pp. 674-81.
51. 1907. A Program of Social Work.
Charities and the Commons, Apr. 20. Vol. XVIII, pp. 97-103.
52. 1908. Who Is the Good Neighbor?
Charities and the Commons, Feb. 29. Vol. XIX, pp. 1642-6.
53. Are Pensions for College Teachers a Form of Socialism?
Science, May 22. N. S., Vol. XXVII, pp. 822-4.
54. Economic Interpretation of History.
Charities and the Commons, May 16. Vol. XX, pp. 228-9.
55. The Political Significance of Recent Economic Theories.
Annals. Vol. XXXII, pp. 82-94.
56. Professor Patten on Monopoly and Social Work; condensed from an article: "Political Significance of Recent Economic Theories," in the Annals, by the ed.
Charities and the Commons. Vol. XX, pp. 451-4, July 4.
57. The Conflict Theory of Distribution.
Yale Review, Aug. Vol. XVII, pp. 156-84.
58. The Social Basis of Prohibition.
Charities and the Commons, Sept. 19. Vol. XX, pp. 705-8.
59. The Laws of Social Attraction.
Popular Science Monthly, Oct. Vol. LXXIII, pp. 354-60.
60. Better an Inspiration of Oxygen than of Alcohol.
Charities and the Commons. Vol. XXI, pp. 299-300.
61. 1909. Wise Words about Some Foolishness.
Educational Review, Mar. Vol. XXXVII, pp. 293-8.

- (Dis- 62. Principles of Economic Interference.
Survey, Apr. 3. Vol. XXII, pp. 14-16.
63. Portrait.
Cosmopolitan, May. Vol. XLVI, pp. 669.
- books. 64. Product and Climax.
Survey, June 5. Vol. XXII, pp. 344.
- Ethics, 65. The Making of Economic Literature.
President's Address: Amer. Econ. Assn. Pub. of Amer. Econ.
Assn. Series III, Vol. X, pp. 1-14; also, The Economic Bulletin,
Vol. I, No. 4, pp. 290-300.
66. 1910. Portrait.
Independent, Jan. 6. Vol. LXVIII, pp. 8.
67. The Crisis in American Home Life.
Independent, Feb. 17. Vol. LXVIII, pp. 342-6.
68. The Theory of Prices in Modern Economics.
Independent, Apr. 7. Vol. LXVIII, pp. 742-6.
69. The Phenomena of Economic Dynamics. (Discussion.)
Pub. of Amer. Econ. Assn. Series III, Vol. XI, pp. 127-30.
70. 1911. University Fellowships.
Science, Feb. 10. N. S., Vol. XXXIII, pp. 216-17.
71. Construction *vs.* Distribution.
Survey, Feb. 18. Vol. XXV, pp. 866-7.
72. The Social Basis of Religion.
Survey, Mar. 4. Vol. XXV, pp. 909-15.
73. Is Christianity Ethics or Religion?
Independent, Mar. 30. Vol. LXX, pp. 655-7.
74. The Method of Science: a Reply.
Science, Apr. 14. Vol. XXXIII, pp. 578-83.
(Answer to a criticism by a Dr. Minot in "Science" for Jan. 27,
1911.)
75. An Economic Measure of School Efficiency.
Educational Review, May. Vol. XLI, pp. 467-79.
76. Ideals of Progress.
Survey, June 3. Vol. XXVI, pp. 387-92.
77. The Church as a Social Institution.
Independent, July 20. Vol. LXXI, pp. 131-3.
78. The Laws of Environmental Influence.
Pop. Science Monthly, Oct. Vol. LXXIX, pp. 396-407.
79. The World's Peace in the Making.
World's Work, Dec. Vol. XXIII, pp. 155-6.
80. Pragmatism and Social Science.
Jour. of Philosophy, Psychology and Scientific Methods. Vol.
VIII, pp. 633-60.
81. 1912. Theories of Progress.
Amer. Econ. Review. Vol. II, pp. 61-8.
82. Social Reform and Politics.
Survey, Apr. 27. Vol. XXVIII, pp. 173-4.
83. Types of Men.
Pop. Science Monthly, Mar. Vol. LXXX, pp. 273-9.

84. The Revival of Economic Orthodoxy.
Pop. Science Monthly, Sept. Vol. LXXXI, pp. 246-9.
85. Wanted: A New Kind of Social Worker.
Survey, Nov. 2. Vol. XXIX, pp. 116.
86. Shall Woman Be Tool or Partner?
Twentieth Century Magazine, July. Vol. VI, pp. 58-62.
87. The Reconstruction of Economic Theory.
Annals, Supp. Nov. (Listed also among books; printed as a separate volume.)
88. The Background of Economic Theories.
Pub. of the Amer. Sociological Society. Vol. VII, pp. 126-30.
Same: Amer. Jour. Sociol., Mar., 1913. Vol. XVIII, pp. 689-93.
89. Social Hymns.
Survey, Dec. 7. Vol. XXIX, pp. 275.
90. 1913. Borrowed Plumes.
Craftsman, Jan. Vol. XXIII, pp. 489-90.
91. Extravagance as a Virtue.
Current Opinion, Jan. Vol. LIV, pp. 51-2.
92. The Relation of Voluntary to Political Action.
Survey, Jan. 4. Vol. XXIX, pp. 421-2.
93. Facts about the Accounts of Learned Societies.
Science, Mar. 7. Vol. XXXVII, pp. 371.
94. The Professor on the Rampage.
Nation, June 12. Vol. XCVI, pp. 591-2.
95. The Reorganization of Social Work.
Survey, July 5. Vol. XXX, pp. 468-72.
96. The Standardization of Family Life.
Annals. Vol. XLVIII, pp. 81-90.
97. The Genesis of Personal Traits.
Pop. Science Monthly, Aug. Vol. LXXXIII, pp. 149-57.
98. Why the Study of Languages Weakens the Will.
Current Opinion, Oct. Vol. LV, pp. 255-6.
99. New Year Resolutions.
Survey, Dec. 27. Vol. XXXI, pp. 360-2.
100. The New Jurisprudence.
Univ. of Penna. Law Review, Nov. Vol. LXII, pp. 1-16.
101. 1914. Hymn Writing.
Survey, Jan. 3. Vol. XXXI, pp. 403-4.
102. The Revision of American Policies.
Annals. Vol. LIV, pp. 191-200.
103. The Evolution of a New Woman.
Annals. Vol. LVI, pp. 111-21.
104. Responsibility for the War.
New Republic, Nov. 14. Vol. I, pp. 21-2.
105. 1915. Economic Fallacies that Favor War.
Moody's, Jan. Vol. XVIII, pp. 13-17.
106. War and the Stock Market.
Moody's, Mar. Vol. XVIII, pp. 113-15.

107. The Future of the Stock Market.
Moody's, Apr. Vol. XVIII, pp. 161-3.
108. Becoming American.
Open Court, July. Vol. XXIX, pp. 385-93.
109. The Slump in Morality.
New Republic, Sept. 11. Vol. IV, pp. 155.
110. The Morality of Force.
New Republic, Oct. 16. Vol. IV, pp. 286.
111. Economic Zones and New Alignments of National Sentiment.
Survey, Mar. 6. Vol. XXXIII, pp. 612-13.
112. The Unnatural Boundaries of European States.
Survey, Apr. 3. Vol. XXXIII, pp. 24-7.
113. Territorial Expansion.
The Univ. of Penna. Lectures, 1914-15. Pp. 199-209.
114. The German Way of Thinking.
Forum, July. Vol. LIV, pp. 18-26.
115. 1916. Taxation after the War.
Annals. Vol. LXIV, pp. 210-14.
116. The Basis of National Security.
Annals. Vol. LXVI, pp. 1-11.
117. The Day of Financial Reckoning.
Moody's, Jan. Vol. XIX, pp. 37-9. (Discussion by W. F. Hickernell. Moody's, Feb., 1916. Vol. XIX, pp. 61-6.)
118. The Financial Menace to America of the European War.
Annals. Vol. LX, pp. 123-9.
119. 1917. The Track of Evolution.
Science Monthly, Oct. Vol. V, pp. 350-8.
120. The Mechanism of Mind.
Annals. Vol. LXXI, pp. 202-15.
121. Peace Without Force.
Annals. Vol. LXXII, pp. 31-40.
122. Problems of War Finance.
Yale Review, Oct. Vol. VII, pp. 73-89.
123. 1918. The Tomorrow of Finance.
Annals. Vol. LXXVI, pp. 257-71.
124. The Fallacy of Price Bidding.
Annals. Vol. LXXVIII, pp. 129-43.
125. Liquidation Taxes.
Annals. Vol. LXXV, pp. 165-81.
126. Mandeville in the Twentieth Century.
Amer. Econ. Review. Vol. VIII, pp. 88-98.
("Mandeville in the Twentieth Century Replies." J. H. Hollander and E. R. A. Seligman. Amer. Econ. Review. Vol. VIII, pp. 338-49.)
127. 1919. Making National Debts National Blessings.
Annals. Vol. LXXXII, pp. 39-51.
Same. (Condensed.)
Survey, Mar. 1. Vol. XLI, pp. 785-6.

- 128. The Genesis of Consciousness.
The Monist. Vol. XXIX, pp. 432-47.
- 129. The Divided Self.
The Monist. Vol. XXIX, pp. 223-7.
- 130. 1920. Backsliding on Social Work.
Survey, June 5. Vol. XLIV, pp. 338-43.
- 131. An Analysis of Mental Defects.
Monist. Vol. XXX, pp. 107-25.
- 132. Cosmic Processes.
Monist. Vol. XXX, pp. 406-42.
- 133. The Failure of Liberal Idealism.
The Freeman. July 14 and 21. Vol. I, pp. 419-21 and 444-6.

III. BOOK REVIEWS, ESTIMATES AND APPRECIATIONS

(1. *Reviews of Books*)

- 1. Premises of Political Economy.
E. Leser. Jahrbücher für Nationalökonomie und Statistik. N. F. Bd. XIV, pp. 267-74.
- 2. Economic Basis of Protection.
Economic Journal, Vol. I, pp. 596.
M. F. Rouxel. Journal des Economistes. 5. ser. t. XLI, pp. 291-3.
Pierre Ridoire. La Réforme Sociale. 4. ser. t. 9, pp. 976.
Ch. Gide. Revue d'Economie Politique. t. 5, pp. 410-12.
- 3. Theory of Dynamic Economics.
John Bates Clark, Annals, Vol. III, pp. 31-44.
Economic Journal, Vol. II, pp. 687.
- 4. Development of English Thought.
M. Smith. Pol. Sci. Quart., Vol. XV, pp. 112-19.
C. R. Henderson. Dial, Vol. XXVIII, pp. 436-7.
Chas. de Garmo. Educational Review, Vol. XVII, pp. 484-8.
Economic Journal, Vol. IX, pp. 417.
K. Diehl. Jahrbücher für Nationalökonomie und Statistik. III. Folge, Bd. XX, pp. 68.
S. Ball. Econ. Review, Vol. X, pp. 114-18.
- 5. Theory of Prosperity.
H. R. Seager. Annals, Vol. XIX, pp. 239-55.
A. S. Johnson. Pol. Sci. Quart., Vol. XVII, pp. 313-19.
S. E. Simons. Amer. Jour. Sociology, Vol. VIII, pp. 122-9.
The Nation, Vol. LXXV, pp. 74.
The Independent, Vol. LIV, pp. 2336-7.
Gunton's, Vol. XXIV, pp. 76-85.
Economic Journal, Vol. XII, pp. 370.
G. Brodnitz. Jahrbücher für Nationalökonomie und Statistik, III. Folge, Bd. XXXI, pp. 398.
S. Ball. Econ. Review, Vol. XII, pp. 501-2.
- 6. Heredity and Social Progress.
G. N. Calkins. Pol. Sci. Quart., Vol. XVIII, pp. 539-41.
The Nation, Vol. LXXVI, pp. 483.

Gunton's, Vol. XXV, pp. 167-70.

Annals, Vol. XXII, pp. 366-9.

Charities and the Commons, Vol. XI, pp. 316-18.

R. R. Marett. *Economic Review*, Vol. XIII, pp. 498-501.

G. M. Whipple. *Educational Review*, Vol. XXVII, pp. 309-12.

7. The Social Basis of Religion.

T. N. Carver. *Amer. Econ. Rev.*

(Patten replied to this review in the *Amer. Econ. Rev.* March, 1912, under the title "Theories of Progress.")

8. The New Basis of Civilization. *Charities and the Commons*, Vol. XVIII, pp. 135-6. May 4, 1907.

9. The Reconstruction of Economic Theory.

B. M. Anderson, Jr. *Pol. Sci. Quart.*, Vol. XXVIII, pp. 123-9.

10. Advent Songs.

Current Opinion, Vol. LXI, pp. 331.

11. Mud Hollow.

J. H. Willits. *Annals*, Vol. CIII, pp. 15.

The Literary Review, July 29, 1922, pp. 842.

New York Times, May 28, 1922, pp. 16.

W. M. Leiserson. *Survey*, Vol. XLVIII, pp. 627.

The Times (London), *Lit. Sup.*, June 1, 1922, pp. 366.

(2. *Reviews of Articles*)

1. Stability of Prices.

Bohm-Bawerk. *Jahrbücher für Nationalökonomie und Statistik*. N. F. Bd. XVIII, pp. 672, 678.

J. L., *Jahrbücher für Nationalökonomie und Statistik*. N. F. Bd. XXI, pp. 98, 99.

2. Fundamental Idea of Capital.

Bohm-Bawerk. *Jahrbücher für Nationalökonomie und Statistik*. N. F. Bd. XVIII, pp. 672, 678.

3. Educational Value of Political Economy.

K. Diehl. *Jahrbücher für Nationalökonomie und Statistik*. III, Folge, Bd. II, pp. 279-80.

Educational Review, Vol. I, p. 512.

(3. *Appreciations and Estimates*)

1. "Appreciation."

The Survey (July 1, 1922). Vol. XLVIII, pp. 477-8.

2. "To Simon N. Patten" (Poem).

Guy Nearing. *The Survey* (Apr. 21, 1917). Vol. XXXVIII, pp. 55.

3. *Forthcoming*. Memorial Volume of appreciations by American Scholars read at the Memorial Meeting for S. N. Patten, held in Chicago, Dec. 29, 1922, at which Professor R. T. Ely presided and papers were read by J. P. Lichtenberger, Francis Tyson, C. H. Crennan, and Rexford G. Tugwell. To be issued as a supplement to the Proceedings of the Annual Meeting of the Amer. Econ. Assn. for 1922; *The Economic Review*, Vol. XII.

4. *Forthcoming*: Notes on the Life and Work of Simon N. Patten.

Rexford G. Tugwell. *Jour. Pol. Econ.*, Apr., 1923. Vol. XXXI, No. 2.

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